XV8031D Self-Contained Leaf Vacuum



Owner's Manual
Safety Manual
Pre-Operating Manual
Operating Manual
Maintenance Manual
Service Manual
Parts Catalog

Sold and Serviced by:

www.xtremevac.com

514030



DO NOT ATTEMPT TO OPERATE OR REPAIR THE LEAF COLLECTOR WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL

IF YOU HAVE ANY QUESTIONS CONCERNING THE INSTALLATION OR OPERATION OF THIS UNIT, PLEASE CALL ODB FOR ASSISTANCE BEFORE ATTEMPTING TO REPAIR OR OPERATE THE UNIT.

IMPROPER USE OF ANY MACHINE CAN RESULT IN INJURY!

STUDY AND FOLLOW ALL SAFETY PRECAUTIONS BEFORE OPERATING OR REPAIRING UNIT

THIS MANUAL IS AN INTEGRAL PART OF THE LEAF COLLECTOR AND SHOULD BE KEPT WITH THE UNIT WHEN IT IS SOLD.

Registration

Please take the time to register you leaf collector and your engine for warranty purposes.

You may go to our website: www.xtremevac.com to register your unit or use the warranty sheet below and mail to:

Attn: Xtreme Vac Registration Xtreme Vac 5118 Glen Alden Drive Richmond, VA 23231

You may also fax the form to: (804) 226-6914.

For engine registration, please use the forms provided in your engine owner's manual.

ODB LEAF COLLECTOR / RMB500 WARRANTY REGISTRATION

(Register your leaf vacuum or RMB500 to start your warranty)

	^^^Register online at www.odbo	co.com/register.ntm^^^	
Purchaser's Name			
Department			
MAILING Address			
City	State/Province	Postal Code	
Leaf Collector Serial Nur	nber		
Leaf Collector VIN Numb	per 1 Z 9 P	R 1 6 8	
Date Delivered (mm/dd/y	/yyy)//		
	eper Model Number (please check 1	•	
Engine Manufacturer:	John Deere □Kawasaki □Cumn	nins □Caterpillar □Other:	i
Engine Serial Number: (example PE4045T123456, John Dee	ere engines must have 13 characters)	The leaf collector owner's and s	safety manual was re-
Contact Name		cieved. I understand that it is the	
Telephone () THANK YOU FOR PURC	CHASING AN Xtreme Vac!	user and mechanic to carefully read and understan safety and operating sections of the owner's manu-	
Note: This form may be	faxed to (804) 226-6914	Purchaser's Signature	Date

Registration



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

PLEASE RECORD THE FOLLOWING INFORMATION BEFORE PLACING THE UNIT INTO SERVICE:		
Model Number:	Unit Serial No.:	
Purchase Date:	Engine Serial No.:	

TABLE OF CONTENTS

▲WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

Contents

1.0 GENERAL SAFETY	
1.1 SAFETY SYMBOL DEFINITIONS:	9
1.2 DO'S AND DO NOT'S:	10
1.3 TRAINING:	12
1.4 Decal Listing:	13
1.4 SAFETY DECALS - Decal Layout for X-treme Vac	14
1.4 Decal Listing: Part Numbers	
2.0 PRE-OPERATING SECTION	
2.1 INSTRUMENTS AND CONTROLS:	17
2.1 INSTRUMENTS AND CONTROLS, cont.:	
2.2 SAFE OPERATIONS:	
2.2 SAFE OPERATIONS (continued):	
2.3 PREPARATION FOR OPERATION	
2.4 PRE-TRANSPORT CHECKS	
2.4 PRE-TRANSPORT CHECKS (continued):	
2.5 PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING	
2.6 WORK SITE PREPARATION	
3.0 OPERATING SECTION	
3.1 Starting Engine	27
3.1 Starting Engine, continued;	
3.2 Engaging the Impeller	
3.2 Engaging the Impeller, continued;	
3.3 Dumping the Body	
3.3 Dumping the body, continued;	
3.3 Dumping the Body, continued;	
3.4 Vacuuming Leaves	
4.0 MAINTENANCE SECTION	
4.1 MAINTENANCE OVERVIEW:	36
4.2 MAINTENANCE AND LUBRICATION CHART	
4.3 LUBRICATION:	
4.3 LUBRICATION, continued;	
4.3 LUBRICATION, continued;	
4.3 LUBRICATION, continued;	
4.4 PREVENTATIVE MAINTENANCE	41 12
4.4 PREVENTATIVE MAINTENANCE, continued;	
4.4 PREVENTATIVE MAINTENANCE, continued;	
T.TIKE VERVICE VICENTED MAINTENANCE, COMMINCH,	44

TABLE OF CONTENTS

▲WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

4.4 PREVENTATIVE MAINTENANCE, continued;	45
4.5 TORQUE VALUES	
4.6 QUICK REFERENCE MAINTENANCE CHART:	47
5.0 SERVICE SECTION	
5.1 Belt Adjustment / Removal	49
5.1 Belt Drive Adjustment, continued;	50
5.2 Impeller Removal / Installation	51
5.2 Impeller Removal / Installation	52
5.3 Impeller Bearings Removal / Installation	53
5.4 Main Circuit Board Plug Diagram	54
5.5 Main Circuit Board Plug Diagram	55
5.6 Flow Control Valve Adjustment Instructions	56
5.7 Trailer Plug Wiring Diagram	57
5.8 Hoist Hydraulic Schematic	58
6.0 PARTS BREAKDOWNS	
6.1 Blower Housing Group	60
6.2 Instrument Panel Group	
6.3 Engine and Engine Base Group - Cummins	62
6-4 Belt Drive Group - Cummins	
6-5 Belt Engagement Group- 31HP Cummins	
6-6 Tongue Group	
6-7 Hydraulic Pump	66
6-7 Hydraulic Pump	67
6-8 PTO Group	68
6-9 Chassis and Axle Group	69
610 Hub and Brake Group	70
6-11 Box Container Group	71
6-12 Light and Reflector Group	72
6-13 Rear Door Hardware	
6-14 Intake Hose Group	74



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

1.0 GENERAL SAFETY

1.0 GENERAL SAFETY

Contents

1.0 GENERAL SAFETY

1.1 SAFETY SYMBOL DEFINITIONS:	9
1.2 DO'S AND DO NOT'S:	10
1.3 TRAINING:	12
1.4 Decal Listing:	13
1.4 SAFETY DECALS - Decal Layout for X-treme Vac	
1.4 Decal Listing: Part Numbers	

AWARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.





DO NOT RIDE, SIT OR STAND ON UNIT.

RIDING ON UNIT
COULD RESULT IN BODILY
HARM OR FATAL INJURY
USE EXTREME CAUTION WHEN
UNIT IS IN USE, OR IN MOTION.

If the decal above is missing or damaged call ODB immediately and we will send you a replacement free of charge. Never operate a unit with damaged or missing safety decals.

A DANGER

DO NOT RIDE, SIT OR STAND ON UNIT

A DANGER

DO NOT MODIFY THE UNIT FOR RIDERS IN ANY WAY. SERIOUS INJURY OR DEATH MAY OCCUR

ODB's leaf collectors are NEVER to be used to accommodate riders. If your unit has been modified to accommodate riders, remove these modifications immediately as this can result in serious injury or death.

WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

1.1 SAFETY SYMBOL DEFINITIONS:

This manual provides the owners/operator with procedures for safe operation, maintenance and repair of your leaf collector. As with any machine, there are hazards associated with their operation. For this reason safety is emphasized throughout this manual. To highlight specific safety information the following safety definitions are provided to assist the reader.

The purpose of safety symbols are to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutues for proper accident prevention measures.

SYMBOL

MEANING



SAFETY ALERT SYMBOL: Indicates danger, warning or caution. Attention is required in order to avoid serious personal injury. May be used in conjuction with other symbols or pictographs.

▲ DANGER

Disregarding this safety warning <u>WILL</u> result in serious equipment damage, injury or possible death.

▲WARNING

Disregarding this safety warning <u>CAN</u> result in serious equipment damage, injury or possible death.

A CAUTION

Disregarding this safety warning <u>MAY</u> result in minor or moderate injury or property damage.

WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

1.2 DO'S AND DO NOT'S:

This section contains some general safety precautions to do and not to do. This is not an all inclusive list and and it is the responsibility of the operator to have proper training and use common sense in work situations.

AWARNING

DO NOT:

- 1. DO NOT operate, maintain or repair this unit without having fully read and understood ALL the aspects of this manual.
- 2. DO NOT ride, sit or stand on unit at anytime.
- 3. DO NOT modify the leaf vacuum for any reasons to allow for riders.
- 4. DO NOT operate the unit in a state of disrepair.
- 5. DO NOT operate the unit with ANY guards or safety devices broken, missing, or inoperable.
- 6. DO NOT operate the unit without wearing proper safety equipment.
- DO NOT operate this unit while under the influence of any alcohol or medication.
- 8. DO NOT operate this unit if you have a record of mental instability or dizziness which could result in injury to yourself or others.
- 9. DO NOT operate this unit if you are under 18 years of age.
- DO NOT operate this unit without fully inspecting the unit for any damage or leakage.
- 11. DO NOT operate if the unit has any excessive vibration.
- 12. DO NOT operate unit with the inspection door limit switch damaged or missing.
- 13. DO NOT tow unit without using all the safety chains.
- 14. DO NOT tow unit with a damaged tongue.
- 15. DO NOT fill fuel tank with engine running. Allow engine to cool for 5 minutes before refueling.
- 16. DO NOT operate unit if fuel is spilled or with fuel cap off.
- 17. DO NOT smoke or weld near the unit.
- 18. DO NOT run engine in an enclosed area.
- 19. DO NOT place hands or feet near moving or rotating parts.
- 20. DO NOT operate engine with an accumulation of grass, leaves or other debris on the engine.
- 21. DO NOT run engine with air cleaner removed.
- 22. DO NOT leave leaf machine unattended while in operation.
- 23. DO NOT park machine on steep grade or slope.
- 24. DO NOT vacuum a leaf pile without looking for foreign objects such as metal, glass, plastic or large pieces of wood.

AWARNING

DO NOT, continued;

DO's:

- 1. DO completely read and understand the owner's manual before operating, maintaining or repairing the leaf collector.
- 2. DO follow engine and PTO manufacturer operating and maintenance instructions.
- 3. DO check fuel lines and fittings frequently for cracks or leaks. Replace if necessary.
- 4. DO completely inspect the unit before leaving the service garage.
- 5. DO check the tow tongue each day for cracks.
- 6. DO inspect and be attentive to what is being vacuumed.
- 7. DO check the impeller, liners and blower housing for cracks or holes daily.
- 8. DO remove the lead spark plug wires, if equipped, before doing any maintenance on the unit.
- 9. DO wear proper safety equipment as described in this manual.
- 10. DO watch for pedestrians, animals and other foreign material when vacuuming leaves.
- 11. DO replace any worn or missing safety stickers immediately.

1.3 TRAINING:

▲WARNING

Improper use of the ODB leaf collector CAN result in severe personal injury or death. All personnel using this leaf vacuum must be trained and qualified with all the operations, maintenance, repair and safety procedures defined in this manual.

The warnings and procedures regarding safety in this manual are to be used as a guideline only. It is impossible to cover all the events that could happen in the vacuuming process. For this reason, it is vital that the owner accept the responsibility to implement a training program that will provide every operator or mechanic the basic skills and knowledge to make good judgement in all situations.

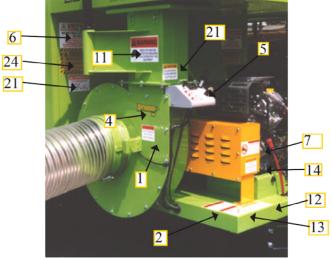
This training program must include the entire scope of hazards, precautions and government regulations encountered in the vacuuming process. The program should stress the need for regularly scheduled preventive maintenance and detailed equipment safety checks.

ODB strongly recommends all training programs be documented to ensure all operators and mechanics receive initial training on not just the operation but the safety features of the leaf collector.

1.4 Decal Listing:











1.4 SAFETY DECALS - Decal Layout for X-treme Vac

A WARNING DO NOT OPERATE **UNIT WITHOUT** HOSE ATTACHED

GASOLINE ONLY

18

A OPERATION OF BODY PROPA

WARNING **CHECK IMPELLER AND BLOWER HOUSING LINERS** FOR WEAR DAILY WORN IMPELLER OR LINERS COULD RESULT IN EQUIPMENT DAMAGE AND SERIOUS BODILY INJURY

A CAUTION 10 ALLOW ENGINE TO IDLE BEFORE SHUTTING OFF

19

A CAUTION A

A WARNING 🙀 DO NOT OPEN COVER WHILE IN OPERATION

WARNING 11 HEAD, EYE AND EAR PROTECTION REQUIRED WHILE OPERATING THIS

EQUIPMENT

20

DO NOT OVER-LUBRICATE

WARNING 12 DO NOT OPERATE UNIT WITHOUT READING **OPERATORS & SAFETY** MANUAL

21



CHOKE THROTTLE OIL IGNITION TEMP CHARGE

6

13



22



DANGER DO NOT RIDE, SIT OR STAND 14 **OVER TIGHTEN** BELT

A CAUTION DO NOT

23



RIDING ON UNIT HARM OR FATAL INJURY
USE EXTREME CAUTION WHEN UNIT IS IN USE, OR IN MOTION.

ON UNIT.

24



A WARNING NOT DO OPEN COVER WHILE IN OPERATION

16



25



FLAMMABLE

A WARNING 17





A DANGER REMOVE TOW BARE AND CHECK THE MOUNTING HOLES FOR CRACKS AND/OR WEAR BEFORE THE MACHINE IS BUT IN SERVICE EVENY EASON.
VISUALLY INSECT THE TOW BARE DAILY FOR DAMAGE.
IF THE TOW BAR IS BENT CO NOT TOW MACHINE: "REPLACE TOW BAR"
O NOT TOW MACHINE UNLESS ALL SAFETY OWNS ARE PROPERLY INSTALLED AND IN GOOD OFFER THE TOTALLED AND IN GOOD OFFER THE TOTALLED AND IN GOOD OFFER THE TOTAL IN TOWARD AND WISEAST TO THE TOWARD THE TOWARD

26



1.4 Decal Listing: Part Numbers

Decals shown on previous page

ITEM NO.	PART NUMBER	DESCRIPTION
1.	65.1801	WarningDo Not Operate Unit Without Hose Attached
2.	200189	WarningCheck Imp. and Blwr Housing
3.	200182	WarningDo Not Open Cover Operation
4.	65.1902	X-treme Vac -small
5.	65.1506	Instrument Panel Sticker
6.	200179	DangerDo Not Sit, Ride or Stand on unit.
7.	200182	WarningDo Not Open Cover Operation
8.	200177	WarningFlammable
9.	200102	Use Gasoline Only
10.	65.1803	CautionAllow Engine to Idle
11.	200181	WarningHead, Eye and Ear Protection
12.	65.1800	WarningDo Not OperateManual
13.	200175	WarningDo Not Raise Hoist
14.	65.1802	XV6527 Sticker
15.	65.1903	X-treme Vac - large, RH
16.	65.1901	WarningHead, Eye, Ear Protection
17.	200181	XV6527 Sticker
18.	200185	Operation of Body Prop
19.	200190	CautionUnload Body
20.	200109	Do Not Overlubricate
21.	200188	DangerDo Not go under body
22.	200178	DangerExplosion Hazard
23.	200183	Warning - Rotating Parts
24.	200187	CautionBody prop must be braced
25.	200180	DangerRemove Tow Bar
 26.	200104	WarningDriver check wheel lugs



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

2.0 PRE-OPERATING SECTION

2.0
Pre-Operating
Section

2.0 PRE-OPERATING SECTION

2.1 INSTRUMENTS AND CONTROLS:	17
2.1 INSTRUMENTS AND CONTROLS, cont.:	18
2.2 SAFE OPERATIONS:	19
2.2 SAFE OPERATIONS (continued):	20
2.3 PREPARATION FOR OPERATION	
2.4 PRE-TRANSPORT CHECKS	22
2.4 PRE-TRANSPORT CHECKS (continued):	23
2.5 PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING	24
2.6 WORK SITE PREPARATION	



A CAUTION

Always make sure the PTO is disengaged before starting unit.

2.1 INSTRUMENTS AND CONTROLS:

Ignition Switch:

Used to power the accessories and start the unit. Unit will not start without Murphy switch depressed.

ACCESSORIES - first position

STARTER ENGAGE - second position (springs return to first position)

Murphy Switch:

This switch overrides the low oil pressure and high temperature cutoff control. This switch must be depressed before the starter engages. After the engine starts, wait for oil pressure to rise before releasing the button.

Throttle:

This control provides positive locking and vernier adjustment of engine.

Combination Tachometer / Hour Meter:

This gauge indicates the engine r.p.m's. The sender is located on the tachometer. The hour meter is digital and indicates the accumulated hours of the engine. This should be used to schedule maintenance.

Volt Meter:

The gauge shows the status of the engine charging system. When the charging system is operating properly it should read approximately 14 volts. If the gauge reads below 13 volts, the alternator is not charging the battery and the system should be checked by a qualified technicican.

Oil Pressure Gauge:

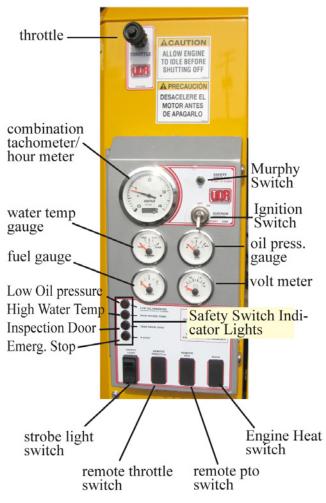
Confirms and indicates the presense and pressure of engine oil. If the gauge reads low, it should be checked by a qualified technician.

Engine Temperature:

Indicates the engine coolant temperature. If the gauge reads over 240 degrees the unit should be checked by a qualified technician.

Hour Meter:

Indicates the accumulated hours of the the engine. This should be used to schedule maintenance.



A CAUTION

Always make sure the PTO is disengaged before starting unit.

2.1 INSTRUMENTS AND CONTROLS, cont.:

SAFETY SWITCH INDICATOR LIGHTS

These lights work with the Murphy (safety) shut off switch. When the light is on it indicates that the shut off switch has been tripped and the light indicates which device caused the trip.

Low Oil Pressure Indicator Light:

When lit the engine has reached a low oil pressure reading and has tripped (thus shut off the engine) the safety shut off (Muprhy) switch. This light will illuminate when the engine is first started until engine oil pressure has been established.

High Water Temperature Indicator Light:

Indicates the engine coolant temperature has reached 225 degrees and has tripped (thus shut off the engine) the safety shut off (Muprhy) switch.

Inspection Door Indicator Light:

Indicates that the limit switch located on the blower housing inspection door has been tripped (thus shut off the engine).

Emergency Stop Switch Indicator Light:

Engine Heat Indicates that the emergency stop switch (on the LCT650 only) switch has been depressed, tripping the safety switch and shutting off the engine.

ROCKER SWITCHES

Strobe Light Switch:

Turns the strobe light on or off

Remote Throttle Switch (optional):

Increases or decreases the engine throttle. Pressing and holding the top of the switch increases the thottle. The longer the button is pressed the higher the throttle is advanced. Pressing the bottom of the switch decreases the throttle in the same manner as increasing the throttle.

Remote PTO Switch (optional):

Engages or disengages the PTO. Pressing the top of the switch engages the PTO while pressing the bottom of the switch disengages the PTO.

Cold Start Switch (Caterpillar engines only):

Pressing the top of the switch for 5 seconds initiates the glow plug to aid in starting a cold engine.

2.2 SAFE OPERATIONS:

AWARNING

ALL personnel using, maintaining or servicing this unit must be trained in all safety procedures outlined in this manual. Improper or careless use of this equipment CAN result in personal injury or death.

Operations shall be restricted to:

- 1. Properly trained, qualified and experienced operators and/or qualified and experienced maintenance and test personnel.
- 2. Trainees under the direct supervision of qualified and experience personnel.
- 3. Qualified and experienced maintenance and service personnel.

Operators who qualify to operate this equipment under the above restrictions shall also comply with the following physical requirements:

- 1. Have good vision and the ability to read and understand this manual as well as all safety and operational decals on the equipment.
- 2. Be capable of hearing, with or without a hearing aid, at a level needed to safely operate this equipment.
- A record of mental stability with no history of epileptic seizures, dizziness, or any other disability that may result in injury to himself or others.

If any of these requirements are not satisfied at any time, the person failing to meet these requirements **MUST NOT OPERATE THIS EQUIPMENT.**

2.2 SAFE OPERATIONS (continued):

Additional Requirements:

- 1. Each operator must demonstrate competence to understand all safety decals, operator's manuals, safety codes, applicable government regulations, and all other information applicable to the safe and proper operation of the leaf vacuum.
- 2. Each operator must demonstrate the ability to recognize an emergency situation that may arise during vacuuming operations and the knowledge and procedures to implement corrective action.
- 3. Each operator must demonstrate or provide evidence of qualificatation and experience prior to operating the leaf vacuum.
- 4. Each operator must be able to recognize existing or potential problems regarding the mechanical integrity of the leaf vacuum and report any maintenance requirements to the supervisor in charge.
- 5. Each operator must wear the proper personal clothing and safety gear. (Refer to SAFETY PRECAUTIONS Section 5.4)
- 6. Operators must not be physically or mentally fatigued.
- 7. Operators must not be under the direct or indirect influence of alcohol and/or drugs. This includes prescription drugs that could cause drowsiness, dizziness, or any other condition that would impair their ability to operate or use this equipment in a safe manner.

2.3 PREPARATION FOR OPERATION

A CAUTION

Before your leaf vacuum is put into operation it is very important to read and follow the procedures outlined in the engine owner's manual. (EOM).

For specific information regarding the following checks please refer to the "Maintenance" section of this manual and the engine owner's manual.

AWARNING

<u>DISENGAGE</u> the clutch and remove the negative battery cable before performing the following checks.

AWARNING

NEVER place any part of the body under or behind guards or any other area in which you cannot see.

IMPORTANT CHECKS:

NOTE: The following checks contained in the next three sections should be performed prior to leaving the storage area.

- 1. Check engine fuel, coolant and oil levels. (see EOM)
- 2. Check engine air filter
- 3. Check all bolts and nuts to ensure they are tight.
- 4. Check all controls for free and proper operation.
- 5. Check main drive belt (if equipped) for proper adjustment.
- 6. Inspect the fan blades to ensure that they are not bent, deformed, fatiqued or cracked.
- 7. Inspect the intake hose flange to make sure it is connected correctly to the blower housing.
- 8. Inspect the leaf vacuum frame and structure for any bent, broken, cracked, missing or loose parts.
- 9. Check all guards to ensure they are undamaged, in place and properly secured.
- 10. All decals must be in place and legible prior to operating the leaf vacuum. See the decal section for decal replacement.

2.4 PRE-TRANSPORT CHECKS

AWARNING

Failure to properly hitch the leaf vacuum to the tow vehicle, verify the road worthiness of the leaf vacuum and the tow vehicle and verify all equipment is properly stowed, may cause serious injury or death to yourself or others.

TOW VEHICLE MUST have proper towing capacity for the leaf vacuum being towed. Check the tow vehicles operating manual for rated capacity.

Do not tow the leaf vacuum unless all important checks listed below are completed.

IMPORTANT CHECKS:

Hitch is properly secured to tow vehicle and hose boom secured.

a. Frame must be level or the tongue slightly lower than the rear of the leaf vacuum while towing to ensure proper weight distribution. The hitch may have to be adjusted when towing with vehicles of varying tow hitch height.

Safety chains installed correctly.

- Chains routed under trailer tongue in an "X" pattern between tow vehicle and trailer.
- b. Slack in chain should be adjusted to permit turning but should not be dragging on the ground.

Connect trailer wiring to the tow vehicle and ensure that all trailer lighting is operating properly.

Ensure that the safety breakaway switch is functioning properly and attached securely to the tow vehicle. Allow enough slack to ensure that vehicle turns will not activate the safety breakaway switch.

NOTE: Follow manufacturers procedure to ensure tow vehicles brake control box is properly adjusted.

Check the general condition of the tires, tire pressure and ensure that all lugnuts are securely fastened.

2.4 PRE-TRANSPORT CHECKS (continued):

IMPORTANT CHECKS (continued):

- Visual examination of the leaf vacuum frame, suspension and structure to determine if all components are correctly positioned and secured for travel.
- 7. Check the intake hose boom to verify that it is securely fastened to the leaf vacuum and can not swing free.
- 8. Verify there are no loose tools or materials on the trailer, inside the intake and exhaust hoses, or inside the engine sheet metal.
- 9. Check all cones, wheel-chocks, signs or other support tools and materials to ensure proper stowage.
- 10. Verify the driver of the tow vehicle is qualified to tow the type and weight of the unit.

2.5 PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

IMPORTANT CHECKS:

Anyone operating ODB's leaf vacuums **MUST** wear appropriate protective equipment and clothing to protect them from injury during operations.

AWARNING

<u>Always</u> wear proper safety equipment as outlined below, not wearing such equipment <u>CAN</u> result in serious personal injury or possible death.

PROTECTIVE EQUIPMENT:

- 1. **Head Protection:** Hard hats without under-chin strapping.
- 2. **Eye Protection:** Wraparound goggle type eye protection held in place with an elastic band around the head or a hard hat mounted face shield, which provides full protection of the face. Eye protection must meet ANSI Z87.1 standards.
- 3. **Hearing Protection:** plug type or "muff type" ear protection should be worn at all times while operating the unit.
- Breathing Protection: Paper filter type dust masks should be worn to protect from dirt and dust particles during the vacuuming process.
- Reflective Vests: Highly visible vests should be worn so motorists can see see the operator in all weather and lighting conditions.
- 6. **Work Gloves:** Gloves should be worn to protect the hands and wrists from debris.
- 7. **Steel Toed Boots:** should be worn to protect the feet.

A DANGER

Work clothes MUST be close fitting, but not restrictive of movement, without any loose parts that could be entangled in any parts of the leaf vacuum. This includes items such as jewelry, chains and backpacks.

2.6 WORK SITE PREPARATION

AWARNING

Never place any part of the body under or behind guards or any other visually obscured area.

Making sure the leaves are clear of possible dangerous material is critical to safe vacuuming. Vacuuming up metal, glass, rocks or other dangerous material <u>CAN</u> cause serious damage to the equipment or personal injury.

The following guidelines must be followed to insure safety.

- An inspection of the leaves to be vacuumed must be done prior to the vacuuming process. We realize that it is impossible to completely inspect every inch of leaves being vacuumed, but it is imperative that all leaves be inpsected for obvious dangerous material before vacuuming.
- 2. The operator should never be in the line of traffic, the operator should work on the shoulder whenever possible.
- 3. The operators should place cones or other barriers to provide adequate warnings to vehicles and pedestrians that vacuuming is in progress.
- 4. Strobe lights on the leaf vacuum and on the tow vehicle should be on at all times for high visibility.
- 5. Confirm that all operators are wearing proper clothes and personal protective equipment.
- 6. Restrict all personnel, except the operator from the area near the leaf vacuum. **DO NOT** allow pedestrians, children or animals near the work area.
- 7. Make sure that the exhaust hose fits properly into the box container so that all debris is blown into the box container.



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

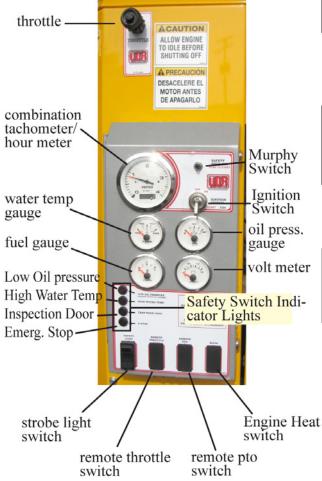
3.0 OPERATING SECTION

3.0 OPERATING SECTION

3.0 OPERATING SECTION

3.1 Starting Engine	27
3.1 Starting Engine, continued;	
3.2 Engaging the Impeller	
3.2 Engaging the Impeller, continued;	
3.3 Dumping the Body	
3.3 Dumping the body, continued;	
3.3 Dumping the Body, continued;	
3.4 Vacuuming Leaves	

figure 3a



3.1 Starting Engine

A CAUTION

Always make sure the PTO is disengaged before starting unit. (See figure 3b)

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before staring the engine.

A CAUTION

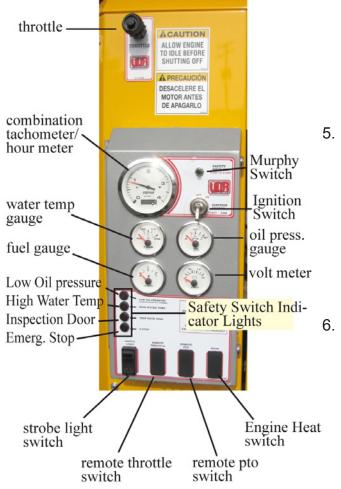
<u>DO NOT</u> start the engine in an enclosed building. Proper ventilation is required before starting the engine.

Review the Engine Operating Manual supplied with your leaf vacuum for specific start-up, maintenance and operating instructions. It is especially important to review break-in service procedures for brand new units.

Starting Procedure (refer to figures 3a and 3b):

- 1. Perform all the pre-starting, pre-operating checks outlined in the EOM and in this manual.
- 2. Make sure the PTO is disengaged.
- 3. Turn the throttle control (fig. 3a) counter-clockwise 2 revolutions.
- 4. Depress and hold the Murphy switch while starting.

figure 3a



3.1 Starting Engine, continued;

IMPORTANT: Do not operate the starter for more than 30 seconds at a time. To do so may overheat the starter. If the engine does not start the first time, wait at least 2 minutes before trying again. If the engine fails to start after 4 attempts, see the trouble shooting section of the EOM and this manual.

5. Pull the ignition switch all the way out, when the engine starts release the ignition switch. It should spring back to the first position.

IMPORTANT: If the ignition switch is released before the engine starts, wait until the starter and the engine stop turning before trying again. This will prevent possible damage to the starter and/or flywheel.

After the engine starts, continue to hold the Murphy Switch in until the oil pressure gauge reads at least 15 psi. The Murphy shut off switch will not allow the engine to operate below this level. If the gauge does not rise above 15 psi withing 5 seconds, stop the engine and determine the cause. Normal operating oil pressure is 50 psi with oil at normal operating temperature.

7. Check all gauges for normal engine operation. If operation is not normal, stop the engine and determine the cause.

IMPORTANT: To assure proper lubrication, operate the engine at or below 1200 rpm with no load for 1 -2 minutes. Extend this period 2 - 4 minutes when operating at temperatures below freezing.

8. Watch the coolant temperature gauge. Do not place engine under load until it is properly warmed up. The normal engine coolant temperature range is 180 - 202 degrees F.

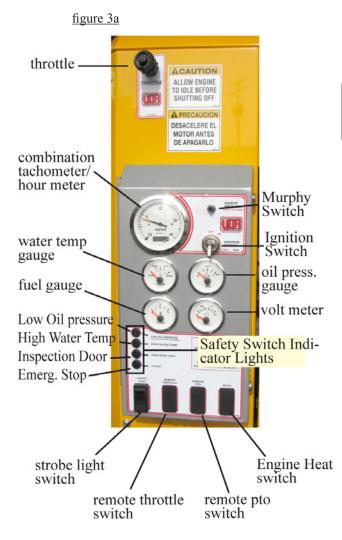


figure 3.2a
Impeller shown <u>disengaged</u>



Handle is horizontal when disen-

3.2 Engaging the Impeller

A CAUTION

Make sure the intake hose is connected properly and that people and objects are clear of the hose.

WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual <u>and</u> the engine owner's manual before staring the engine.

A CAUTION

<u>DO NOT</u> start the engine in an enclosed building. Proper ventilation is required before starting the engine.

Review the Engine Operating Manual supplied with your leaf vacuum for specific start-up, maintenance and operating instructions. It is especially important to review break-in service procedures for brand new units.

Impeller Engagament Procedure (refer to figure 3.2a):

- 1. Perform all the pre-starting, pre-operating checks outlined in the EOM and in this manual, including checking the engine oil and coolant level.
- 2. Check that the intake hose is connected properly and that people and objects are clear of the hose before starting the engine.
- 3. Start the engine as detailed in section 3.1
- 4. Run at idle for several minutes before engaging the impeller

Impeller shown engaged



Handle is vertical when engaged

A CAUTION

Be aware of the intake nozzle before impeller engagement. Secure is safely.

A CAUTION

Engage the belt <u>SLOWLY</u> so the engine will not stall.

A CAUTION

Allow the engine to warm up sufficiently before collecting leaves.

Collecting leaves with a cold engine WILL cause engine damage.

3.2 Engaging the Impeller, continued;

- 5. Raise the engine rpm to approximately 1,700 RPM.
- 6. **SLOWLY** raise the handle toward the engine to engage the belt and impeller. This must be done **SLOWLY** so the engine will not stall.

<u>IMPORTANT:</u> Make sure the intake hose is secured and is not going to vacuum something unintentional during engagement.

6. Check for any vibration or irregular noise before vacuuming leaves. If there is any vibration or irregular noise, shut down the unit immediately and investigate.

IMPORTANT: To assure proper lubrication, operate the engine at idle with no load for 1 -2 minutes. Extend this period 2 - 4 minutes when operating at temperatures below freezing.

DISENGAGING THE IMPELLER

- 7. Lower the engine RPM to idle and SLOWLY pull the handle to a horizontal position.
- 8. Run the engine for at least one minute before shutting down the engine.

A CAUTION

Reduce engine speed to idle for one minute before shutting engine off. Engine damage can occur from run-on or after-burning if engine is stopped suddenly from high speed operation.

3.3 Dumping the Body

A DANGER

Make sure all people and animals are completely clear of the unit during the dumping process.

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before staring the engine.

A DANGER

Always operate the dump body controls from the front of the unit, standing beside the tongue.

WARNING

Make sure the unit is properly attached to the tow vehicle and the surface is level and solid before raising the body.

figure 3.3a

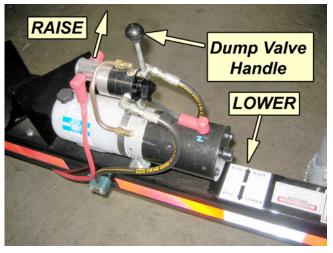


figure 3.3b



AWARNING

Watch for any overhead obstacles such as power lines and tree limbs before dumping.

Review the Engine Operating Manual supplied with your leaf vacuum for specific start-up, maintenance and operating instructions. It is especially important to review break-in service procedures for brand new units.

<u>Dumping the body (refer to figures 3.3a and 3.3b):</u>

- 1. Perform all the pre-starting, pre-operating checks outlined in the EOM and in this manual.
- 2. Do a thorough inspection of the entire area around and above the unit, looking for any object that could get in the way of the body dumping.
- 3. Make sure the surface is level and the ground is solid before dumping.
- 4. Open the rear doors and secure to the side of the box container.

figure 3.3a

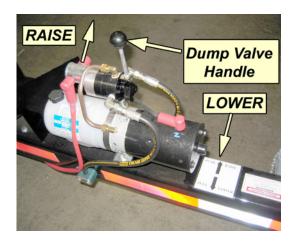


figure 3.3b

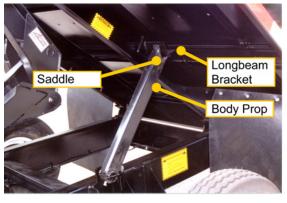
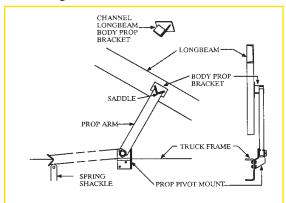


figure 3.3c



3.3 Dumping the body, continued;

- 5. Grasp the hand valve handle (fig. 3.3a) push the handle to the right(toward the radiator) to raise the body.
- 6. Raise the body only as high as it is needed to dump the load.
- 7. Shut off all power, raise the body prop(s) (fig. 3.3b) to a free standing position. Lower the body slowly until the the long beam bracket contacts
- 8. the prop arm saddle (fig. 3.3c). DO NOT POWER HOIST DOWN.

Lowering the body:

- Before lowering the body, walk completely around the unit and thoroughly inspect the area between the body and the unit's frame. Look for any object, person or animal that could potentially get between the dump body and the frame. DO NOT go under the body while inspecting.
- 2. <u>Slowly</u> raise the body just enough to clear the body prop saddle, lower the body prop to the storage position (fig 3.3c) and slowly lower the body.
- 3. The dump body may stop approximately 12" from the bottom due to the safety check valve. If it does, slowly raise the body a few inches and SLOWLY lower the body down. The body needs to be lowered extremely slow the last 12 inches or the check valve will stop the body.
- Once the body is completely down, close the rear doors and prepare the unit for travel as detailed in this manual.

3.3 Dumping the Body, continued;

A DANGER

Make sure all people and animals are completely clear of the unit during the dumping process.

WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before staring the engine.

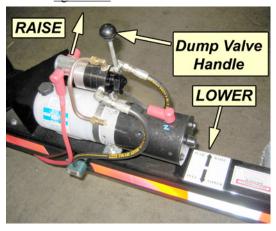
A DANGER

Always operate the dump body controls from the front of the unit, standing beside the tongue.

▲WARNING

Make sure the unit is properly attached to the tow vehicle and the surface is level and solid before raising the body.

figure 3.3a



AWARNING

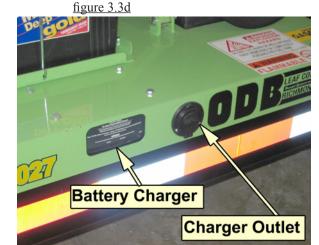
Watch for any overhead obstacles such as power lines and tree limbs before dumping.

Please Note:

The hoist hydraulic pump (figure 3.3a) is powered by the battery and is only capable of dumping the hoist 3 - 4 times before the battery needs to be recharged.

At the end of EVERY day the battery needs to be recharged by plugging the battery charger (figure 3.3d) into an electrical outlet

Do not try to operate the hoist with a discharged battery as it may damage the hydraulic pump.



3.4 Vacuuming Leaves

AWARNING

Thoroughly read and understand the safety, pre-operating and operating sections of this manual before vacuuming. Wear the proper safety equipment as outlined in this manual.

▲WARNING

Make sure the exhaust hose is connected to the box container properly before vacuuming leaves. Visually inspect the leaves before vacuuming for any material that could be harmful to the leaf vacuum or people. This includes bottles, wood, steel, glass, stone or other hard or breakable objects.

Vacuuming Leaves:

- 1. Start the engine using the procedures stated earlier in this manual.
- 2. Engage the impeller as previously described.
- 3. Set the engine throttle to around 1,400 rpm.

NOTE: Always vacuum leaves using the lowest rpm as possible. This saves fuel and decreases the amount of dust escaping the box container.

- 4. Lower the intake hose to a few inches above the leaf pile. Hold the intake nozzle at a 45 degree angle to allow proper air flow. This should allow the leaves to be vacuumed. **DO NOT** bury the intake nozzle into the leaf pile, this will cut off the air flow and will make vacuuming much more difficult and increase the chance of clogging.
- 5. If the leaves are not vacuuming, increase the rpm to 1,600 and try vacuuming at this setting.

NOTE: Wet leaves will need higher rpm's to vacuum whereas dry leaves will only need minimal rpm's.

6. Continue moving the nozzle in a sweeping motion above the leaves while vacuuming.

Maintenance Section



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

4.0 MAINTENANCE SECTION

4.0 MAINTENANCE SECTION

4.1 MAINTENANCE OVERVIEW:	
4.2 MAINTENANCE AND LUBRICATION CHART	37
4.3 LUBRICATION:	38
4.3 LUBRICATION, continued;	39
4.3 LUBRICATION, continued;	40
4.3 LUBRICATION, continued;	41
4.4 PREVENTATIVE MAINTENANCE	42
4.4 PREVENTATIVE MAINTENANCE, continued;	43
4.4 PREVENTATIVE MAINTENANCE, continued;	44
4.4 PREVENTATIVE MAINTENANCE, continued;	45
4.5 TORQUE VALUES	46
4 6 OUICK REFERENCE MAINTENANCE CHART	47

4.0 MAINTENANCE SECTION

Maintenance Section

4.1 MAINTENANCE OVERVIEW:

A CAUTION

Only properly trained personnel should perform maintenance or repair on this equipment. Consult ODB before performing any maintenance procedures that is not specificially covered in this manual. Improper maintenance or repair may void any and all warranties on this equipment.

▲WARNING

Improper maintenance or repair <u>CAN</u> result in equipment damage and/or personal injuries.

A DANGER

BEFORE CONTINUING, please read and understand the Safety, Preoperating and Operating sections of this manual before doing any prodcedures in this section.

A properly maintained leaf vacuum will dramatically extend the life of the unit and will create a safer work place as well. For the general safety and welfare of all personnel it is important to create a scheduled maintenance program that covers all the elements in this manual as well as the engine, PTO and axle owner's manuals provided with this unit.

Use the chart on the following page as a guide for your scheduled maintenance program. If there are any questions concerning any ot these procedures please call your Xtreme Vac dealer.

4.2 MAINTENANCE AND LUBRICATION CHART

This chart is only a reference, always consult the Owners Manual of the Engine, PTO, etc for actual recommendations

(Use Hour Meter as a Guide)

INTERVAL					
Daily	First 8 Hours	Every 25 Hours	Every 50 Hours	Every 100 Hours	Every 200 Hours
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	•	8 Hours • • • • • • • • • • • • • • • • • • •	Daily First 8	Daily First 8 Every 25 Hours Hours Hours Hours For Hours Hours Hours Hours For Hours Hours Hours Hours	Daily First 8 Hours

Check Fuel Tank for Corrosion / Cracks

k = have an authorized Kawasaki engine dealer perform those services

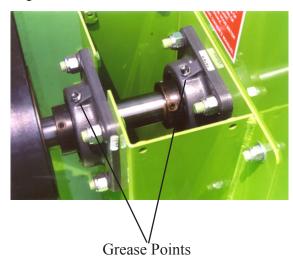
^{* =} see the engine owner's manual for complete details

4.3 LUBRICATION:

A CAUTION

Remove the negative battery terminal before attempting any lubrication procedures.

Figure 4.3A



NOTE: DO NOT mix different types of grease. The old grease MUST BE purged before a different type of grease is used. Mixing grease WILL cause premature failure to the bearings.

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before performing any lubrication procedures.

The following are general lubrication procedures for our standard units. Any special or custom built units may have other lubrication procedures not directly mentioned in this manual. Please consult ODB before any lubricating procedures not specifically mentioned in this manual.

Proper lubrication of your unit correlates directly to how long your unit will last. A properly maintained unit will last much longer than a unit that is not maintained properly.

NOTE: Always lubricate bearings at the end of each work day. This will displace any moisture in the bearings. Also lubricate thorougly before extended shutdown or storage.

Lubrication Points:

1. <u>Drive Bearings (if equippped) (figure 4.3a):</u>

These bearings are critical components of the belt-driven units. These bearings should be greased every 10 hours with approximately two strokes from the average hand pump grease gun. The type of grease used in these bearings are also critical to the performance of the bearings. A multipurpose, heavy-load, high-temperature, moisture resistant #2 grease is required for the drive bearings. ODB recommends <u>LubeMaster Premalube 4234 grease</u>. Other premium quality grease that matches the above requirements may be used but after years of testing ODB recommends the Premalube grease.

4.3 LUBRICATION, continued;

Lubrication Points, continued;

2. Trailer Wheel Bearings (figure 4.3b): Most of ODB's units are equipped with "EZ-Lube" grease fittings. This allows the operator to grease the bearings without removing the hubs. The "EZ-Lube" feature consists of axle spindles that have been specially drilled and fitted with a grease zerk in their ends (fig. 4.3c). When grease is pumped into the zerk, it is channelled to the inner bearing and then flows back to the outer bearing and eventually back out the grease cap hole. The trailer wheel bearings should be checked and greased after the first 30 days of service then at the beginning of every season.

Grease specifications:

Thickener Point	Lithium Complex
Dropping Point	230 degr. C minimum
Consistency	NLGI No.2
Additives	EP,Corrosion & Oxidation
	Inhibitors
Base Oil	Solvent refined Petroleum Oil
Base Oil Viscosity	@40 deg. C 150cSt Min.
Viscosity Index	80 Minimum
Pour Point	10 deg. Minimum

Approved Sources:

Mobil Oil	Mobilgrease HP
Exxon/Standard	Ronex MP
Kendall Refining	Kendall L-427
Ashland Oil CoValvo	line Val-plex EP Grease.
PenzoilPremium Whe	eel Bearing Grease 707L

For any questions concerning wheel lubrication please consult the axle owner's manual supplied with your leaf collector or contact ODB.

Figure 4.3b



Grease fitting is behind rubber plug

Figure 4.3c

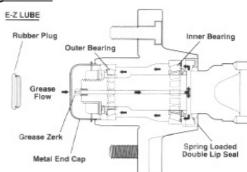


Figure 4.3d



Figure 4.3e



4.3 LUBRICATION, continued;

Lubrication Points, continued;

- Boom Socket (figure 4.3d): The socket should be greasedonce a week to keep the boom mast moving smoothly. Grease the boom socket once every week with a multi-purpose moisture resistant #2 grease.
- 4. Hinge and Friction Points: Leaf vacuum operation and longevity can be improved by keeping hinges and friction points lubricated. ODB recommends that lubricaton be performed weekly. Use SAE30 weight oil on hinges and a premium grade, high temperature lithium based EP#2 grease on friction points.
- 5. Boom Extension (figure 4.3e):
 Grease the extension tube once ever

Grease the extension tube once every week with a multi-purpose lubricant.

▲WARNING

Never go under the dump body unless the body is empty and the body prop(s) is in the proper position.

▲WARNING

The body prop is designed and intended to support an <u>EMPTY</u> truck body in the raised position. Unload the body before using the body prop(s).

4.3 LUBRICATION, continued;

Lubrication Points, continued;



Never go under the dump body unless the body is empty and the body prop(s) is in the proper position.

- **Hydrauilc Hoist Fittings (figure 4.3f:** Raise 6. and support the dump body as detailed in section 3.2. Lubricate the fittings at least every 200 hours of operation with a #2 high grade grease. There are tremendous forces on the bearing sufaces within the hoist frame. It pays to be generous with the grease gun, to insure proper operation and long life.
- 7. Hoist Hinge and Body Prop(s) Fittings (figure Each hinge pivot has a grease fitting that needs

lubrciating every 200 hours. The body prop(s) has a fitting at the pivot area as shown in figure 4.3g.

Figure 4.3f

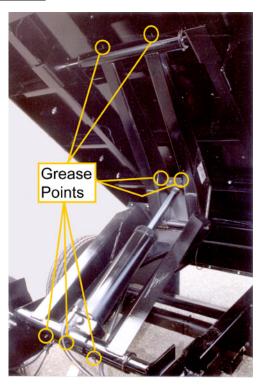
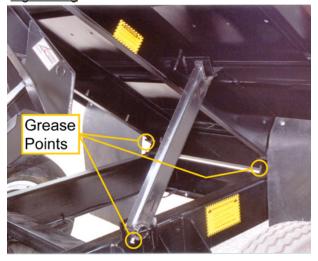


Figure 4.3g



▲ WARNING

The body prop is designed and intended to support an **EMPTY** truck body in the raised position. Unload the body before using the body prop(s).

4.4 PREVENTATIVE MAINTENANCE

A CAUTION

Remove the lead spark plug wires before attempting any maintenance procedures.

WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before performing any maintenance procedures.

The following are general preventative maintenance procedures for our standard units. Any special or custom built units may have other preventative maintenance procedures not directly mentioned in this manual. Please consult ODB before doing any preventative maintenance procedures not specifically mentioned in this manual.

Proper preventative maintenance of your unit, just like lubrication, correlates directly to how long your unit will last. A properly maintained unit will last much longer than a unit that is not maintained properly.

Preventative Maintenance:

- 1. Engine Oil: Change the oil and oil filter according to schedules provided in your engine's owner's manual (EOM). The engine oil level should be checked every day. The level should be checked after the engine has been stopped for a period of time. This will allow the oil to drain back into the oil pan, allowing a better indication of the true oil level. If the level is low, see the engines owner's manual for the correct type of oil.
- Engine Coolant: Check the coolant level before starting the unit each day. The coolant level should not be less than one inch below the top of the radiator.

A CAUTION

<u>NEVER</u> check the engine coolant when the engine is hot. Allow the engine to cool at least one hour before checking the coolant. Check the engine owner's manual for instructions. <u>ALWAYS</u> wear eye and hand protection when working with the radiator.

4.4 PREVENTATIVE MAINTENANCE, continued;

Preventative Maintenance, continued;

Engine Radiator: The engine radiator on a leaf vacuum becomes 3. clogged with dust and debris frequently because of the nature of the job. If the radiator is not cleaned properly it WILL cause improper cooling and WILL eventually cause serious damage to your engine. The debris accumulating on the radiator can be lessened by lowering the RPM on the engine to a level just enough to vacuum the leaves. The higher the RPM the more dust that is put into the air. Also, it may be necessary to put mesh or tarps on the top of the leaf box container to reduce the debris and dust. If this is done, make sure there is enough air ventilation on the box so the box is not blown apart. Proper belt condition and coolant mix-ratio, as well as coolant conditioners, are all critical to proper engine cooling. See the engines owner's manual for specifics on coolant mixture ratios and conditioners. The radiator should be inspected and cleaned with compressed air everyday at the very least.

A DANGER

<u>NEVER</u> attempt to clean or inspect the radiator with the engine running or while the engine is HOT. Allow the engine to cool at least one hour before mantaining the radiator. Check the engine owner's manual for instructions. <u>ALWAYS</u> wear eye and hand protection when working with the radiator.

- Engine Air Cleaner: Due to the large amounts of dust generated in collection leaves, it is critical to your engine's life that the pre-cleaner and air filter be maintained properly. The pre-cleaner (if equipped) should be cleaned at least daily of any debris that has accumulated. If conditions warrant it should be cleaned more. The air filter should be checked daily and should be replaced at the first sign of it being dirty. See the engine's owner's manual for detailes. It is a good idea to clean out the air filter housing once a week to clean any dust debris that may have accumulated.
- Tires and Wheels: Tires and wheel lug nuts should be checked on a daily basis. Tires should be checked for excessive wear and proper air pressure. Check the side wall of the tire for proper inflation pressure. Torque all 1/2" diameter lug nuts from 90 to 120 foot pounds. Torque all 5/8" diameter lug nuts from 175 to 225 foot pounds. Consult the axle manufacturers owner's manual for more detailed information.

4.4 PREVENTATIVE MAINTENANCE, continued;

Preventative Maintenance, continued:

frailer Brakes (if equipped): Most of the newer ODB leaf vacuums have electric brakes on the axle(s). It is critical that these brakes work properly. The trailer's brakes should be checked daily, before leaving the equipment yard, for proper operation. The trailer brakes are designed to work in synchronization with your tow vehicles brakes. Never use your tow vehicle or trailer brakes alone to stop the combined load. The synchronization between the tow vehicle and the leaf vacuum is accomplished through the brake controller and needs to be set correctly. Please read the brake controllers manual and the axle owner's manual for these procedures.

WARNING

<u>DO NOT</u> tow the leaf vacuum with damaged or non-operating brakes. Check the brakes daily for proper operation.

The brakes should be adjusted after the first 200 miles of operation when the brake shoes and drums have "seated" and at 3,000 mile intervals, or as use and performance requires. The adjustment procedures are beyond the scope of this manual, please see the axle owners/service manual for specific instructions.

The trailer brakes should be inspected and serviced at yearly intervals or more often as use and performance requires. Magnets and shoes must be changed when they become worn or scored thereby preventing adequate vehicle braking. Again, see the axle owner's/service manual for specific procedures.

7. **FUEL TANK:** Fill the fuel tank at the beginning of the work shift leaving a gap of at the top of the tank for expansion of fuel. A full fuel tank will reduce the possibility of condensation forming in the tank and moisture entering the fuel lines. Check the fuel lines daily for cracks, holes or tightness.

4.4 PREVENTATIVE MAINTENANCE, continued;

Preventative Maintenance, continued;

A CAUTION

ALWAYS wear eye and hand protection when working with the battery.

- 8. **BATTERY:** ODB's units are supplied with "maintenance free" batteries so there is no need to check fluid levels but the battery terminals should be checked daily for corrosion. Remove any corrosion with a wire brush and coat the terminals with light grease or petroleum jelly to reduce the possibility of corrosion. Also check the battery cable for wear all cable connections and battery tie downs to be certain that they are not loose.
- 9. **DRIVE BELT (if equipped):** The main drive belt should be checked daily for cracks and for proper tension. If the belt shows any sign of

A CAUTION

Remove the lead spark plug wires before removing the belt guard.

- cracking it should be replaced immediately. The proper tension of the belt should be approximately 1/2" deflection when applying a 8 pound pull.
- 10. **FASTENERS:** Fasteners should be checked weekly for the first 30 days and monthly thereafter. They must be in place at all times and properly torqued. For general torque values see the torque chart at the end of this section.

4.5 TORQUE VALUES

RECOMMENDED TORQUE IN FOOT POUNDS				
TYPE	E HEX HEAD CAP SCREWS			
SAE GRADE	5	8		
HEAD MARK	\bigcirc			
SIZE				
1/4"	9	9		
5/16"	18	18		
3/8"	33	33		
7/16"	52	52		
1/2"	80	80		
9/16"	115	115		
5/8"	160	160		
3/4"	280	280		
7/8"	450	450		
1"	675	675		

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

4.6 QUICK REFERENCE MAINTENANCE CHART:

A CAUTION

Only properly trained personnel should perform maintenance or repair on this equipment. Consult your dealer before performing any maintenance procedures that is not specificially covered in this manual. Improper maintenance or repair may void any and all warranties on this equipment.

NOTE: THIS CHART IS FOR REFERENCE ONLY, CONSULT THE ENGINE'S OWNERS MAN-UAL FOR SPECIFIC DETAILS. FOR CUMMINS A SERIES ENGINES ONLY.

ITEM	
Fuel Requirement	Use ASTM No.2D diesel fuel with min.Cetane number of 40
Fuel Capacity	20 gallons
- · · · · ·	
Engine Oil:	
Grade	API service classicfication; CF-4,SG, or SJ class.
Viscocity	SAE 15W-40 heavy duty engine oil such as Valvoline Premium Blue
	(see EOM manual for details)
Capacity	4.3 US qt (filter is not removed); 4.5 US qt. (when filter is removed)
Coolant:	
Туре	Permanent type of low-silicate ASTM4985 antifreeze; green in color
Mixture	Water 50%; Antifreeze 50%; (1:1)
Freezing Point	-36 degrees C (-33 degrees F)
Amount	2.5L (2.6 US qt.)
Thermostat	
Beginning Opening	71 degrees C (160 degrees F)
Full Open	85 degrees C (185 degrees F)

AWARNING

Improper maintenance or repair <u>CAN</u> result in equipment damage and/or personal injuries.

A DANGER

BEFORE CONTINUING, please read and understand the Safety, Preoperating and Operating sections of this manual before doing any producedures in this section.



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

5.0 SERVICE SECTION

5.0 SERVICE SECTION

5.1 Belt Adjustment / Removal	49
5.1 Belt Drive Adjustment, continued;	50
5.2 Impeller Removal / Installation	51
5.2 Impeller Removal / Installation	52
5.3 Impeller Bearings Removal / Installation	53
5.4 Main Circuit Board Plug Diagram	54
5.5 Main Circuit Board Plug Diagram	55
5.6 Flow Control Valve Adjustment Instructions	56
5.7 Trailer Plug Wiring Diagram	57
5 8 Hoist Hydraulic Schematic	58

5.0 SERVICE SECTION

5.1 Belt Adjustment / Removal

A CAUTION

Make sure the engine is OFF and the lead spark plug wires have been removed before attempting any service procedures.

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before proceding.

A CAUTION

The engine may be HOT, use caution when working around the engine and muffler area.

AWARNING

Before removing any safety guards make sure the engine has been disabled by removing the lead spark plug wires.

Belt adjustment / Removal is made easy by the using the engine adjustment brackets and bolts. Be careful when working around the engine and muffler area, as it may be hot. On a new unit, the belt should be adjusted after the first 30 hours of use and every 100 hours thereafter.

Belt Adjustment / Removal Procedure :

- 1. Disengage the impeller by pulling the handle to a horizontal postion. (see figure 5.1A)
- 2. Remove the belt guard cover by removing the bolts around the cover plate (Item A on FIG. 5.1B).
- 3. Loosen the engine base bolts (Item B on FIG 5.1B), there are 2 in the front and 2 in the rear.

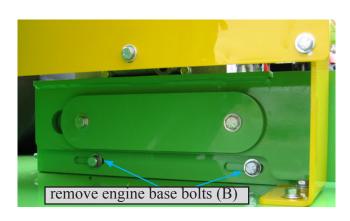
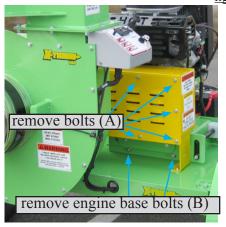


figure 5.1A



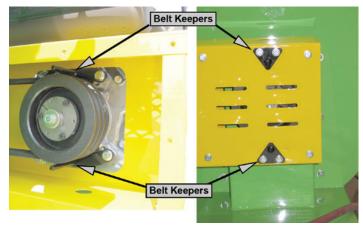
figure 5.1B



5.1 Belt Drive Adjustment, continued;

Belt Adjustment / Installation Procedure :

- Then drive the adjuster bolts (Item C on FIG. 5.1C and FIG. 5.1D) counter-clockwise to move the engine toward the impeller shaft. This will loosen the belt.
- 2. If you are removing the belts, the belt keepers must be removed also. There are 4 belt keepers, 2 on each pulley.



- 3. To tighten or install the belt, make sure the two pulleys are lined up. Use a straight edge to make sure (FIG 5.1E). If the pulleys are not lined up loosen one of the pulleys and move the pulley in or out until the two pulleys line up.
- 4. Tighten the belt by turning the adjuster bolt clockwise until the belt is tight. The correct tension is when the belt deflects 1/2" using an 8 pound pull. DO NOT OVERTIGHTEN.
- 5. Re-install the belt guard cover exactly as you removed it.

Adjuster Bolts

Figure 1997

Adjuster Bolts

figure 5.1D

figure 5.1C

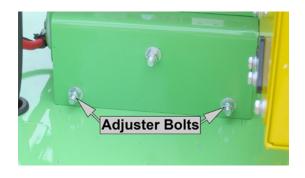


figure 5.1E



5.2 Impeller Removal / Installation

A CAUTION

Make sure the engine is OFF and the lead spark plug wires have been removed before attempting any service procedures.

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before proceding.

A CAUTION

The engine may be HOT, use caution when working around the engine and muffler area.

AWARNING

Before removing any safety guards make sure the engine has been disabled by removing the lead spark plug wires.

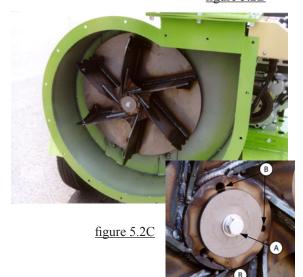
<u>Impeller Removal :</u>

- 1. Disconnect the negative cable from the battery attempting to open the blower housing face.
- Remove the blower housing face by removing the bolts that hold the face on to the blower housing back (FIG 5.2A).
- Once the blower housing face has been removed, look at the condition of the inside of the housing (FIG 5.2B). Check for any holes or wear. If any damage is found, REPLACE the housing immediately. Do not try to repair.
- 4. Remove the center bolt in the impeller by turning it counter-clockwise (Item A FIG 5.2C) Remove the washer and the the impeller should come out. In some instances it may be necessary to connect a gear puller to the threaded holes in the impeller hub (Item B FIG 5.2C)in order to remove the impeller.

figure 5.2A



figure 5.2B



5.2 Impeller Removal / Installation

A CAUTION

Make sure the engine is OFF and the lead spark plug wires have been removed before attempting any service procedures.

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before proceding.

A CAUTION

The engine may be HOT, use caution when working around the engine and muffler area.

▲WARNING

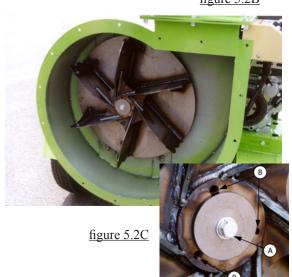
Before removing any safety guards make sure the engine has been disabled by removing the lead spark plug wires.

<u>Impeller Installation:</u>

- Coat the inside of the impeller hub with anti-sieze compound to allow for an easier removal the next time.
- 2. To install put the impeller hub on the shaft. Overhang the hub over the shaft by about 1/8". Then apply the washer and the bolt (Figure 5.2C). This will "squeaze" the hub onto the shaft to create a tight fit.
- 3. Torque the impeller bolt to 90 lbs/ft.
- 4. Install the blower housing face as it was taken off. (Figure 5.2A)



figure 5.2B



5.3 Impeller Bearings Removal / Installation

AWARNING

Before removing any safety guards make sure the engine has been disabled by removing the lead spark plug wires.

AWARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before proceding.

A CAUTION

The engine may be HOT, use caution when working around the engine and muffler area.

A CAUTION

Make sure the engine is OFF and the lead spark plug wires have been removed before attempting any service procedures.

Bearings Removal / Installation :

- 1. Disconnect the the spark plug wires from the spark plug before attempting to open the blower housing face.
- 2. Remove the impeller using the procedure outlined in section 5.2.
- 3. Remove the drive belt using the procedure outlined in section 5.1.
- 4. Remove the bearing cover by removing the 4 bolts that hold the cover (item A, FIG 5.3A)
- 5. Loosen the locking collars (Item A, FIG 5.3B) using an Allen wrench, turn the collars counterclockwise to loosen from the shaft.
- 6. Remove the nuts (Item B, FIG 5.3B) from the bearings.
- 7. Slide the entire shaft out. The pulley can stay on the shaft while doing this.
- 8. Pull the bearings from the bolts.
- 9. To install, reverse the above procedure.



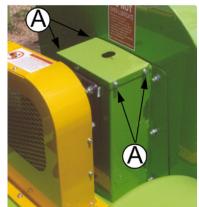
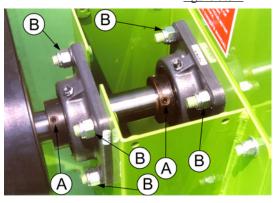


figure 5.3B



5.4 Main Circuit Board Plug Diagram

Main Harness Plug

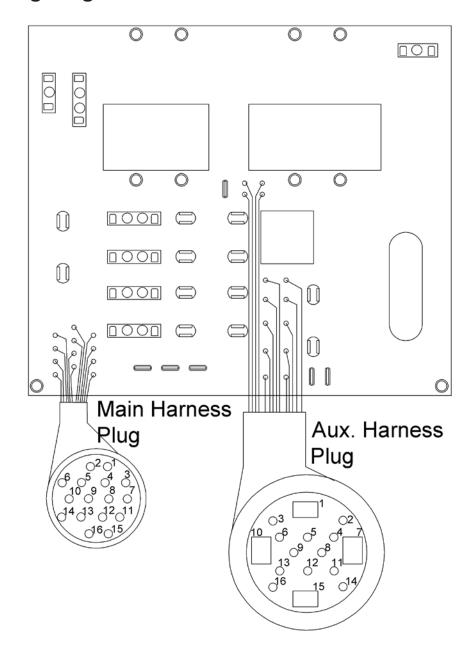
Pin#	# Description
1	Red + from battery
2	Red / Blue stripe - starter +
3	Orange - Fuel Sol./Col +
4	Black - Ground
5	Purple Alt Energize +
6	White / Red stripe Oil Signal
7	White - Tach Signal
8	Tan / Black stripeE Stop Sig.
9	Tan - Insp. Door Signal
10	Pink - Fuel Level Signal
11	Blue - Temp Signal
12	Blue/Black Temp Shtdwn Sig
13	Red/Black Oil Shutdown Sig.
14	Empty
15	Empty

Aux. Harness Plug

Pin# Description

Empty

1	Red + from battery
2	Yellow - Aux Plug harness
3	Yellow - Remote Throttle Har
4	Yellow / Orange stripe-Aux har
5	Orange / Yellow stripe-Aux har
6	Yellow / Green stripe-Clutch Eng
7	Empty
8	Green / Yellow stripe-Clutch Diseng
9	Yellow / Blue stripe-Throttle Fast
10	Empty
11	Blue / Yellow stripe-Throttle Slow
12	Yellow / Blue stripe-Strobe +
13	Purple / Yellow stripe-Strobe Sw+
14	Yellow - Aux Harness
15	Black - battery
16	Yellow - Aux Harness



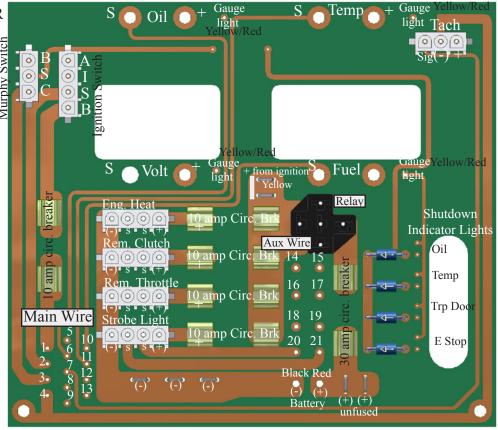
5.5 Main Circuit Board Plug Diagram

TOP LAYER

The circuit board has traces on 2 layers - the top and bottom.

Main Plug Wire ID's

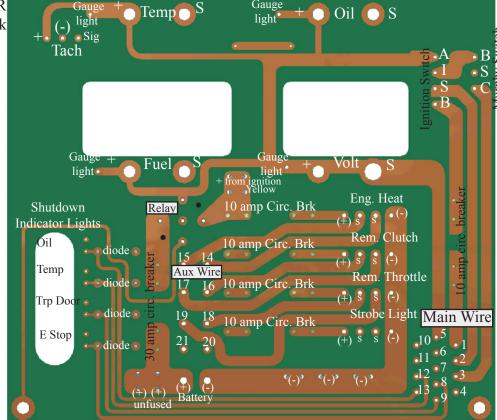
1	+ from Battery (Red)		
2	Starter + (Red/Blue)		
3	Fuel Sol./Col + (Orange)		
4	Ground (Black)		
5	Alt Energize + (Purple)		
6	Oil Signal (White/Red)		
7	Tach Signal (White)		
8	E Stop Sig. (Tan/Black)		
9	Insp. Door Sig. (Tan)		
10	Fuel Level Sig. (Pink)		
11	Temp Sig. (Blue)		
12	Temp Shtdwn Sig (Blue/Blk)		
13	Oil Shutdown Sig. (Red/Blk)		



BOTTOM LAYER (looking from the back

Aux Plug Wire ID's

14	Eng Heat (+) (Yellow/Orange)
15	Eng. Heat Aux (Orange/Yellow)
16	Clutch Engage (Yellow/Green)
17	Clutch Disengage (Green/Yel)
18	Throttle Fast (Yellow/Blue)
19	Throttle Slow (Blue/Yellow)
20	Strobe Light + (Yellow/Purple)
21	Aux Light + (Purple/Yellow)



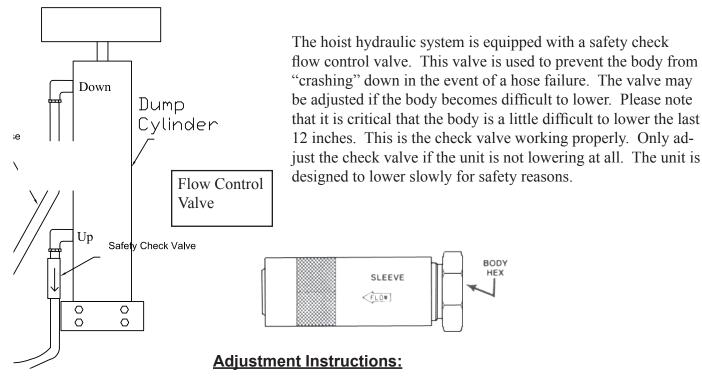
XtremeVac D

5.6 Flow Control Valve Adjustment Instructions

A DANGER

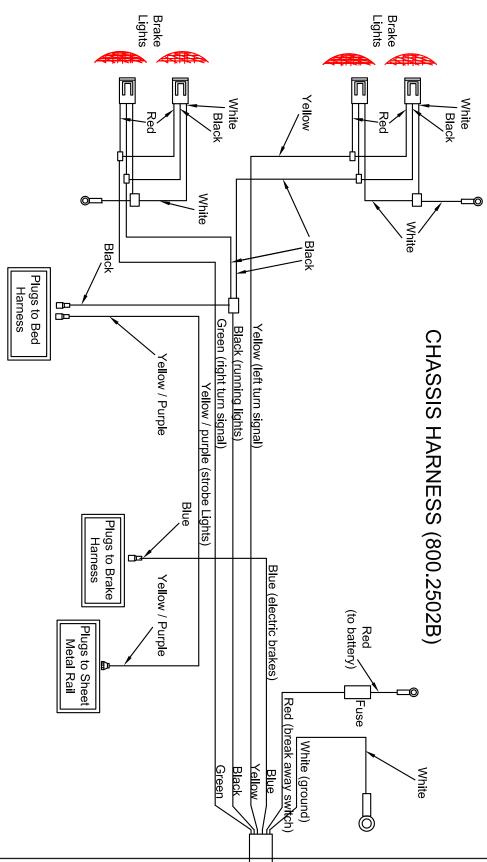
A DANGER

Before attempting to go under the dump body, make sure the body is completely DOWN. If you must go under a raised body be sure to use the body prop, an overhead crane and sufficient supports rated above the dump container max load rating. These supports must be positioned in a way to assure that the body can not come down. Failure to follow these safety guidelines can result in death or severe personal injury.

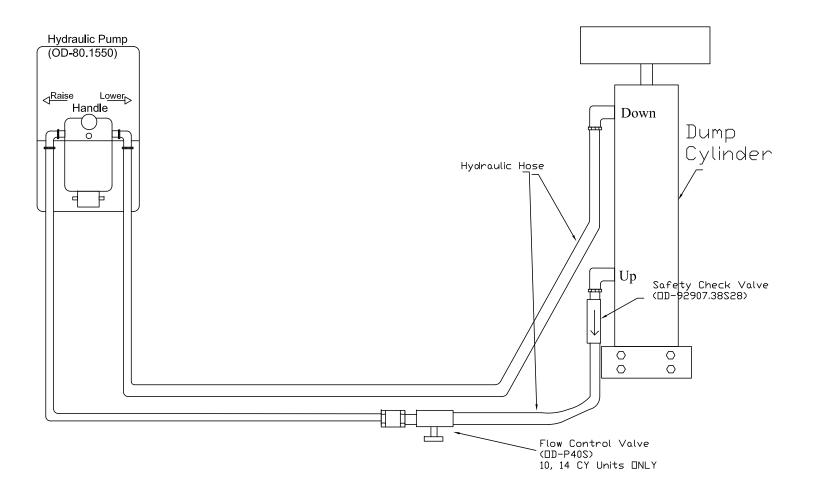


- 1. Install valve in system, downstream of any safety relief valve. USE WRENCH ONLY ON BODY HEX.
- 2. Loosen set screw and turn sleeve away from body hex as far as possible.
- 3. Operate system at anticipated flow rate, but with pressure reduced to allow sleeve to be turned by hand.
- 4. Slowly turn sleeve towards body hex until valve "trips" and stops flow.
- 5. Relieve inlet pressure, allowing valve to re-open.
- 6. Turn sleeve away from body hex 1/4 turn. Valve is now adjusted to close when subjected to excessive flow.
- 7. If valve "trips" during normal operating conditions, re-adjust using 1/2 turn instead of 1/4 turn. See step 6.
- 8. After final adjustment, tighten set screw on sleeve.

5.7 Trailer Plug Wiring Diagram



5.8 Hoist Hydraulic Schematic



Parts Section



Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

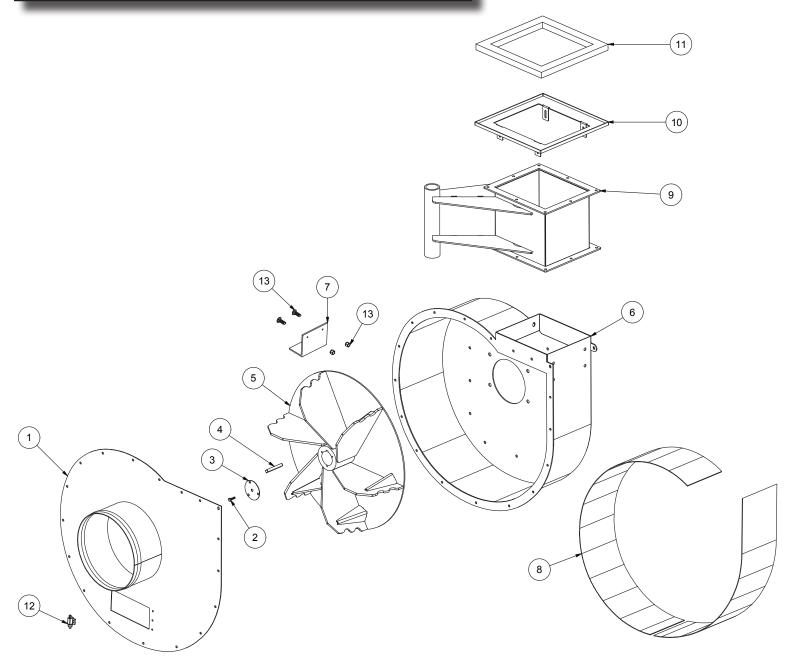
6.0 PARTS BREAKDOWNS

6.0 PARTS BREAKDOWNS

6.1 Blower Housing Group	00
6.2 Instrument Panel Group	61
6.3 Engine and Engine Base Group - Cummins	62
6-4 Belt Drive Group - Cummins	63
6-5 Belt Engagement Group- 31HP Cummins	
6-6 Tongue Group	65
6-7 Hydraulic Pump	66
6-7 Hydraulic Pump	
6-8 PTO Group	68
6-9 Chassis and Axle Group	69
610 Hub and Brake Group	70
6-11 Box Container Group	71
6-12 Light and Reflector Group	72
6-13 Rear Door Hardware	
6-14 Intake Hose Group	74

6.0 PARTS BREAKDOWNS

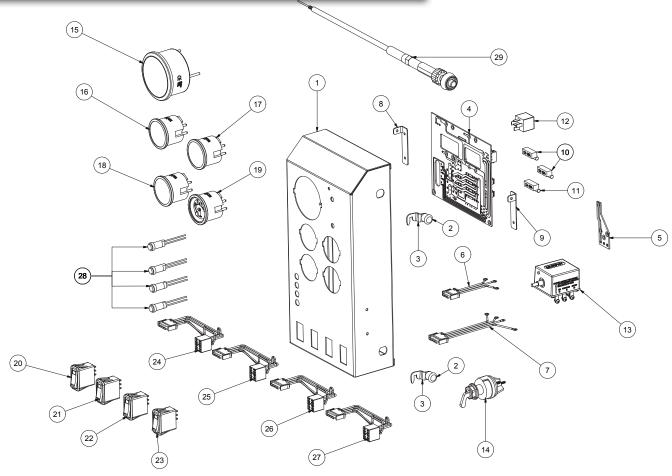
6.1 Blower Housing Group



ITEM#	PART NO.	DESCRIPTION
1	65.1002E	Blower Housing Face
2	65.1005C	Bolt, Impeller
3	65.1005	Washer, Impeller
4	65.1005B	Key, Impeller
5	65.1004C	Impeller
6	65.1002D	Blower Housing Back
7	65.1002LC	Curved Liner

	ITEM#	PART NO.	DESCRIPTION
	8	65.1002L	Large Liner
	9	80.1006	Exhaust Duct
	10	80.1007	Exhaust Duct Flange
i	11	80.1007G	Gasket
	12	6410.51	Limit Switch
1	13	65.1002L1B	Liner Bolt
		65.1002L1N	Liner Nut

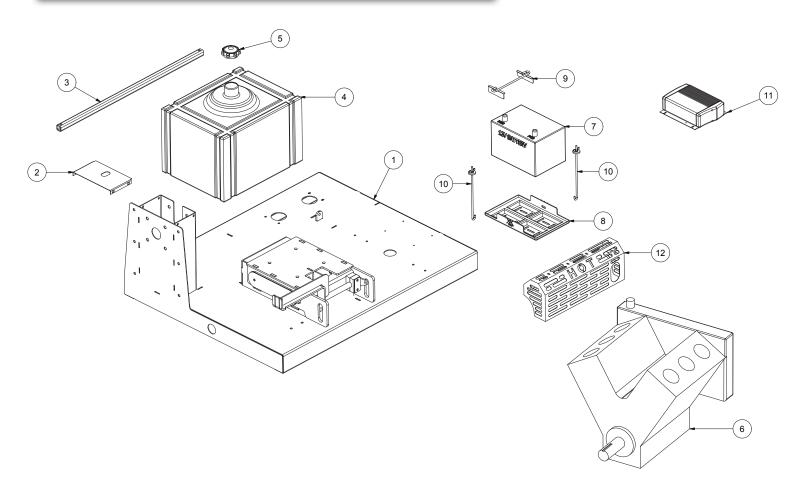
6.2 Instrument Panel Group



ITEM#	PART NO.	DESCRIPTION
1	STD.6300 STD.6301	Instrument Panel Complete Inst.Panel Housing with latches
2	STD.6308	Latch
3	STD.6309	Latch Hook
4	STD.2005	Circuit Board
5	STD.2006	Tachometer Circ. Board
6	400022	Murphy Swith Harness Plug
7	400021	Ign. Switch Harness Plug
8	STD.6303	Circ. Brd Supp Brkt, LH
9	STD.6302	Circ. Brd Supp Brkt, RH
10	100014.10	Circuit Breaker, 10 amp
11	30410.30	Circuit Breaker, 30 amp
12	VF4-15F11	Relay
13	MO-P81505	Murphy Switch
14	31.253	Ignition Switch

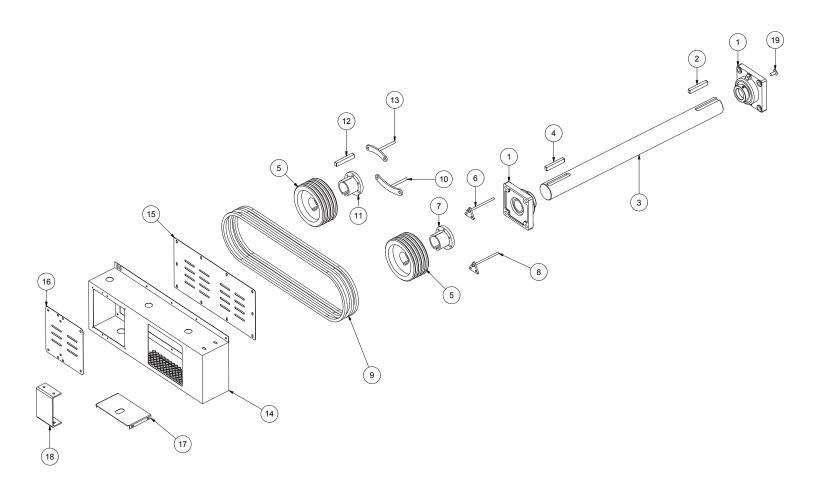
ITEM#	PART NO.	DESCRIPTION
15	63524	Tachometer / Hour Meter
16	62540	Temperature Gauge
17	62542	Oil Pressure Gauge
18	62551	Fuel Gauge (if equipped)
	59414	Blank Gauge
19	62555	Volt Meter
20	4045.0021B1	Rocker Switch, Safety Light
21	4045.0021A1	Rocker Switch, Rem. Thrttle
22	4045.0025A	Rocker Switch, Rem. PTO
23	3054.0028.	Rocker Switch, Engine Heat
24	STD.2003	Switch Harness, Light
25	STD.2004	Switch Harness, Rem Thrtle
26	STD.2004	Switch Harness, Rem PTO
27	STD.2002	Switch Harness, Eng Heat
28	STD.1502B	LED Light Assembly
29	LCT623.001A	Throttle Cable

6.3 Engine and Engine Base Group - Cummins



ITEM#	PART NO.	DESCRIPTION	
1	80.1000AA	Engine Skid	
2	65.1011B	Pedistal Lid	
3	80.1008	Blower Housing Support Bar	
4	8972	Fuel Tank	
5	65.1102B	Fuel Cap	
6	65.1200	Engine. Cummins 31HP	
7	80.1300	Battery	
8	80.1301	Battery Tray	
9	65.1303	Battery Holddown Bar	
10	65.1302	Battery J-Hooks	
11	80.1306	Battery Charger	
12		Warning, Hot Guard	

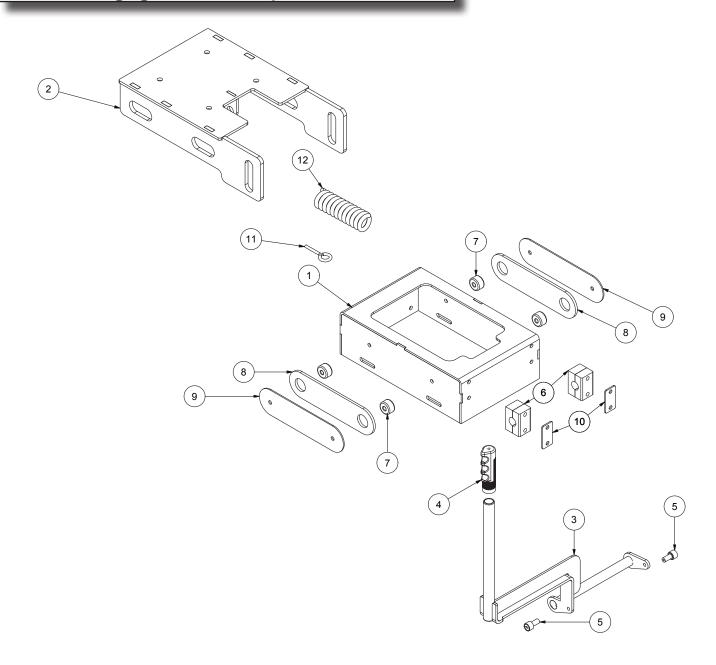
6-4 Belt Drive Group - Cummins



ITEM#	PART NO.	DESCRIPTION
1	65.1406	Drive Bearings
2	65.1005B	Key, Impeller
3	65.1405B	Shaft
4	65.1403B	Key, Pully Bushing
5	65.1402AA	Pulley
6	65.1408	Belt Keeper, Top Impeller
7	65.1403	Bushing, Impeller
8	65.1409	Belt Keeper, Bottom Impeller
9	65.1401AA	Drive Belt (
10	65.1411	Belt Keeper, Bottom Engine

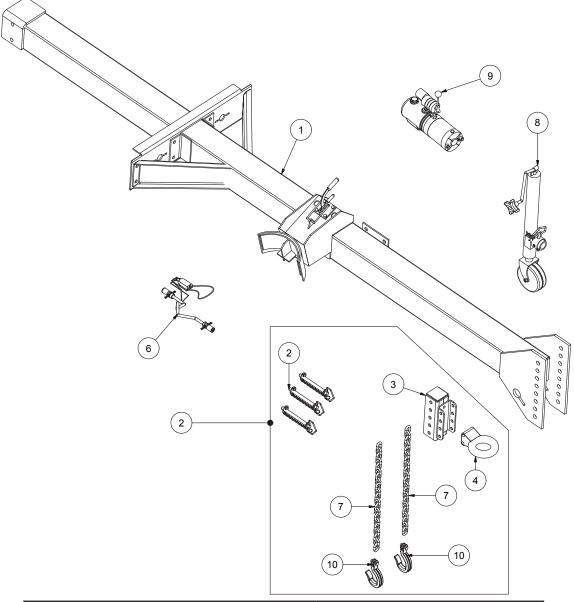
ITEM#	PART NO.	DESCRIPTION
11	65.1404AA	Bushing, Engine
12	65.1404B	Key, Bushing Engine
13	65.1410	Belt Keeper, Top Engine
14	65.1400G	Belt Guard
15	65.1400DD	Guard Back Cover
16	65.1400H	Guard Front Cover
17	65.1011B	Pedistal Cover
18	65.1400F	Belt Guard Support
19	65.1412	Shaft Bolt

6-5 Belt Engagement Group- 31HP Cummins



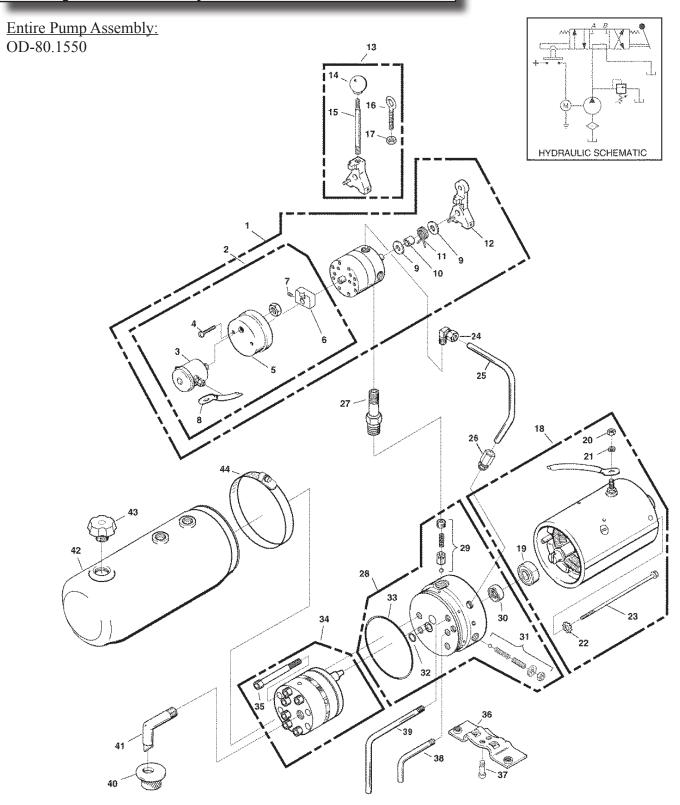
ITEM#	PART NO.	DESCRIPTION	ITEM#	PART NO.	DESCRIPTION
1	65.1003BB	Motor Mount, Adjustable	7	65.1003G	Cam Follower, 1.25"
2	65.1003AA	Motor Mount, Top Plate	8	65.1003I	UHMW Slide Shim
3	65.1003D.31	Engagement Handle	9	65.1003EE	Side Shim Plate
4	SCL670.5	Handle Grip	10	65.1003F	Cap Plate
5	65.1003H	Cam Follower, 1"	11	65.1003L	Tension Spring Eye Bolt
6	65.1003E	UHMW Block	12	65.1003K	Tension Spring

6-6 Tongue Group



ITEM#	PART NO.	DESCRIPTION
1	80.1099	Tongue
2	LCT622.623D	Pintle Eye Assembly
3	LCT622.623A.2	Block
4	LCT622.623	Ring
5	200012	Pins
6	LCT622.626B	Power Cord
7	SCL800.625	Safety Chains
8	80.1103	Parking Jack
9	MP-M310	Hydraulic Pump

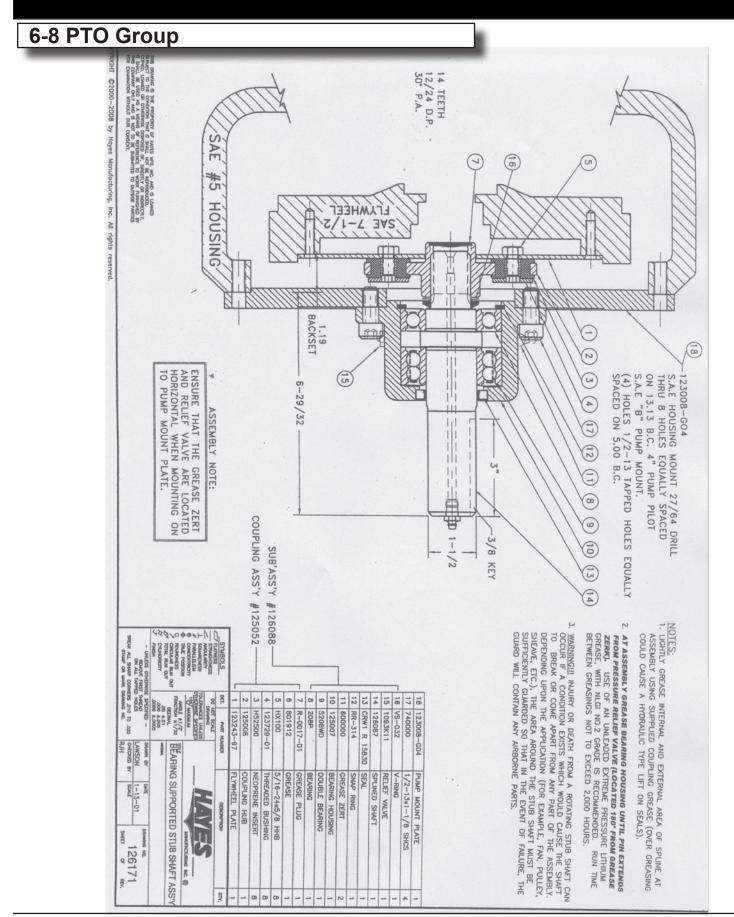
6-7 Hydraulic Pump



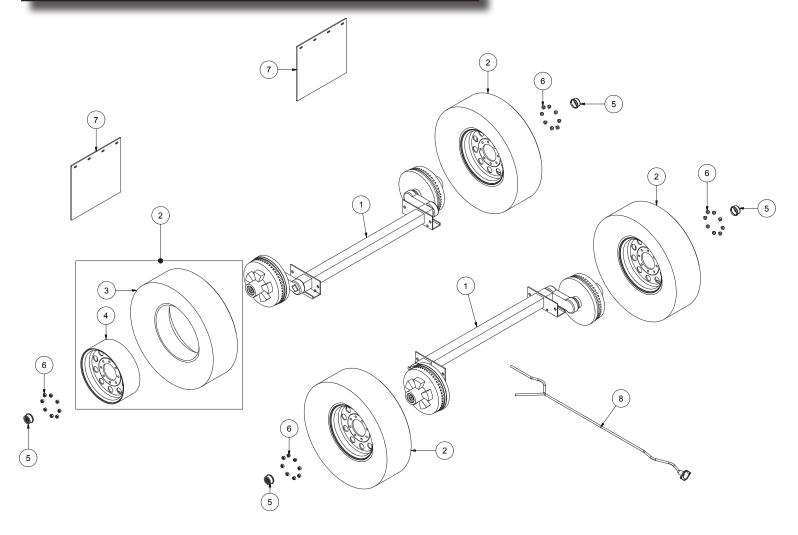
6-7 Hydraulic Pump

MOTOR SECTION

ITEM	PART		ITEM	PART	DECODIDATION
NO.	NUMBER	DESCRIPTION	NO.	NUMBER	DESCRIPTION
1	07120	VALVE ASSEMBLY COMPLETE 1	24	01225	ELBOW ASSEMBLY, 90 Deg
2	04202	 PARTS KIT, Switch Assembly 	25	13065	TUBE, Return 1
3	04343	• • SWITCH, Start	26	01231	CONNECTOR ASSEMBLY 1
4	07908	 SCREW, Mach, pan head 2 	27	01318	ADAPTER, Pump/Valve
5	04344	• • COVER, Start Switch 1	28	12450	BASE ASSEMBLY, Modular 1
6	04342	CAM, Start Switch 1	29	07526	 PARTS KIT, Check Valve (main) 1
7	07909	• • SCREW, Socket Set, 5/16-18 1	30	02159	• SEAL 1
8	04322	• • CABLE 1	31	03766	 PARTS KIT, Relief Valve 1
9	07780	 WASHER, Flat, (bore 5/16") 2 	32	00120	 O-RING, Industrial
10	00016	 BUSHING, Torsion Spring 1 	33	02352	 O-RING, Industrial
11	00018	 SPRING, Torsion 1 	34	K12171-250	PUMP ASSEMBLY, Modular 1
12	01077	 HANDLE ASSEMBLY 1 	35	07818	 SCREW, 1/4-20 x 3 S Head Cap 4
13	00172	 HANDLE ASSEMBLY 1 			(For Pump Assembly -250)
14	01157	• • BALL, Plastic 1	36	04559	BRACKET, Plate Mount 5" C to C 1
15	01326	• • ROD, Handle 4" 1		04560	BRACKET, Plate Mount
16	01327	 EYEBOLT, Rod Control 	37	07592	SCREW, Skt Hd Cap, 3/8-16 x 1 2
17	07790	• • NUT, 5/16-18 1	38	13059	TUBE, Return (1/8" NPT) 1
		EAKDOWN OF VALVE, SEE VALVE	39	13058	TUBE, Return (1/8 NPT) 1
SECT	ION		40	01134	SCREEN, Filter (suction) 1
18	08111	MOTOR, Electric, 12 VDC 1	41	01209	TUBE, Filter Suction 3/8" NPT
19	02318	 BEARING, Base, motor 1 	42	06102	RESERVOIR, 4-1/2" Dia. x 8",
20	07625	• NUT, Hex, 5/16-24 1	43	03171	PLUG, Vent, 3/8" NPT 1
21	07781	 WASHER, Lock, 5/16" 1 	44	07900	CLAMP 1
22	07737	WASHER, Star, 1/4" 4			
23	07738	 SCREW, Hex Head Cap 			
FOR F	URTHER BRE	EAKDOWN OF MOTOR, SEE			

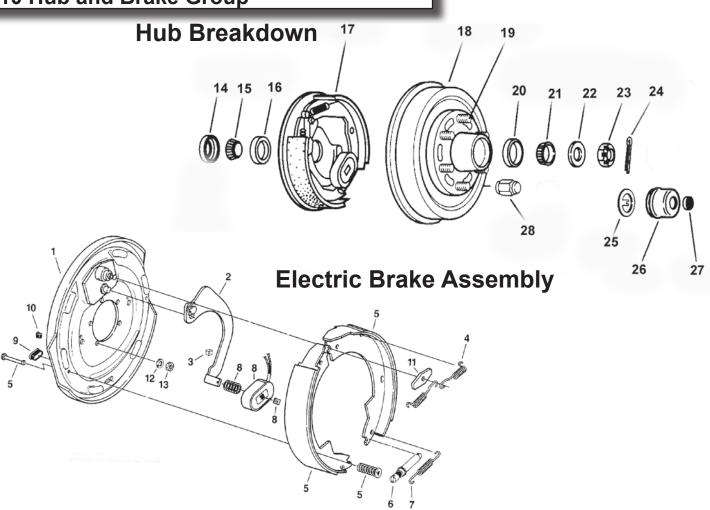


6-9 Chassis and Axle Group



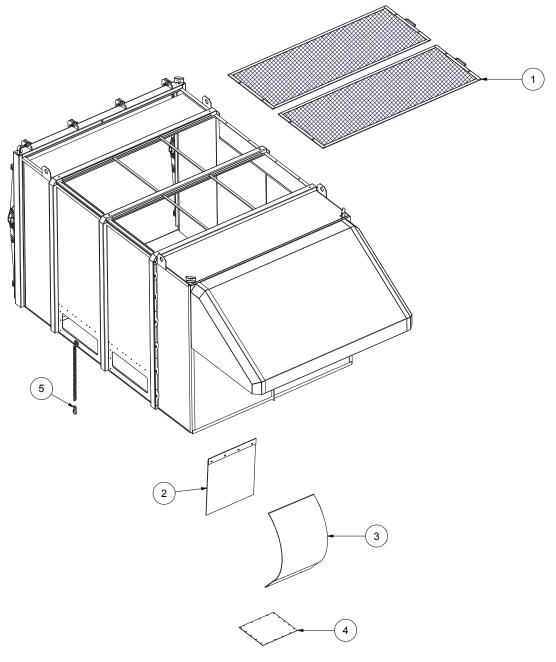
ITEM#	PART NO.	DESCRIPTION
1	80.1104	Axle
2	LCT622.619	Tire and Rim Assembly
3	LCT622.619T	Tire
4	LCT622.619R	Rim
5	021.042.01	Grease Cap
6	LCT622.619N	Lug Nut
7	80.0057	Mud Flap
8	80.1651	Chassis Wiring Harness

610 Hub and Brake Group



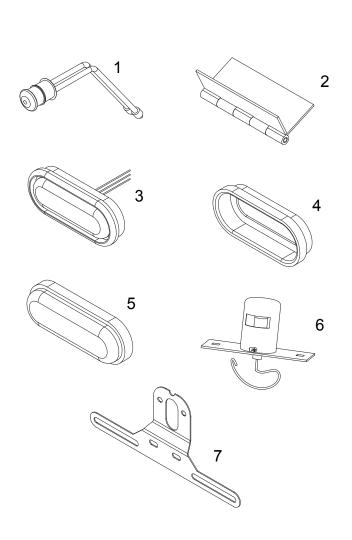
ITĘM	PART	DESCRIPTION	ITEM	PART	DESCRIPTION
NO.	NUMBER	DESCRIPTION	NO.	NUMBER	DESCRIPTION
*	023.105.00	Complete Brake Assembly LH	14.	10.10	Grease Seal
*	023.106.00	Complete Braek Assembly RH	15.	031.030.02	Inner Bearing Cone
1.	036.089.05	Backing Plate Assembly	16.	031.030.01	Inner Bearing Cup
2.	047-107-00	Actuating Lever Arm Assembly LH	17.	023.105.00	Electric Brake Assembly LH
2.	047-108-00	Actuating Lever Arm Assembly RH		023.106.00	Electric Brake Assembly, RH
3.	027-005.00	Wire Clip	18.	008.201.09	Grease Hub & Drum
4.	046.009.00	Retractor Spring	19.	007.122.00	Wheel Stud
5.	k71.048.00	Shoe and Lining Kit	20.	031.032.01	Outer Bearing Cup
6.	043.004.00	Adjuster Assembly	21.	031.032.02	Outer Bearing Cone
7.	046.018.00	Adjusting Screw Spring	22.	005.023.00	Sprindle Washer
8.	k71.105.00	Magnet Kit	23.	006.001.00	Spindle Nut
9.	046.007.00	Plug	24.	N/A	Not Used
10.	046.016.00	Wire Grommet	25.	005.101.00	Tang Washer
11.	005.067.00	Anchor Post Washer	26.	021.042.01	Grease Cap, without plug
12.	005.004.00	Lockwasher	27.	085.001.00	Rubber Plug
13.	006.010.00	Brake Mounting Nut	28.	LCT622.619N	Lug Nut

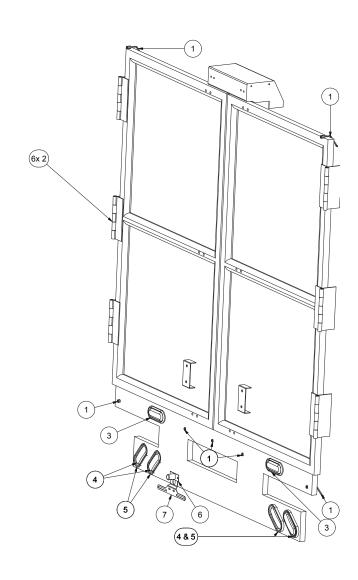
6-11 Box Container Group



ITEM #	PART NO.	DESCRIPTION
1	SCL805.810	Exhaust Screen
2	SCL800.811	Deflector Rubber Flap
3	80.0059	Deflector Liner
4	80.0058	Cover Plate
5	200008	Spring Clip

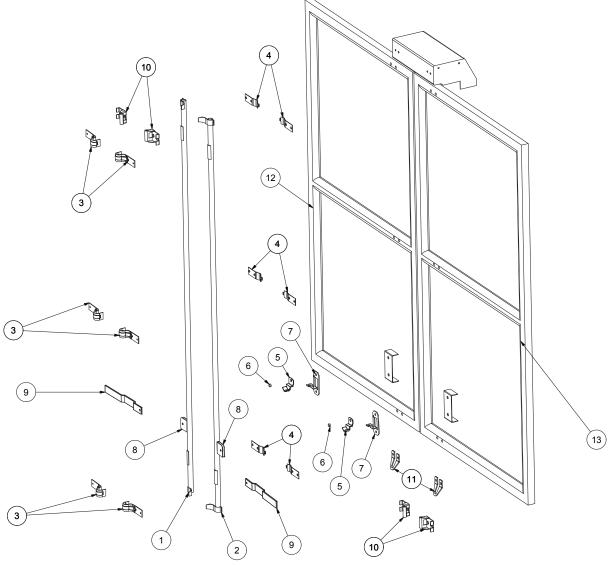
6-12 Light and Reflector Group





ITEM #	PART NUMBER	DESCRIPTION
1	STD.2201 STD.2202	LED Marker Light, Red rear of unit LED Marker Light, Yellow front of unit
2	SCL800.028	Door Hinge
3	STD.2213.A	LED Strobe Light with Flasher
4	STD.2414	LED Tail Light Assembly (after 01/05)
	94706	Plug Harness (after 01/05)
5	60700	Oval Grommet for tail light
6	LCT60.615B	License Plate Light
7	LCT600.010	License Plate Bracket

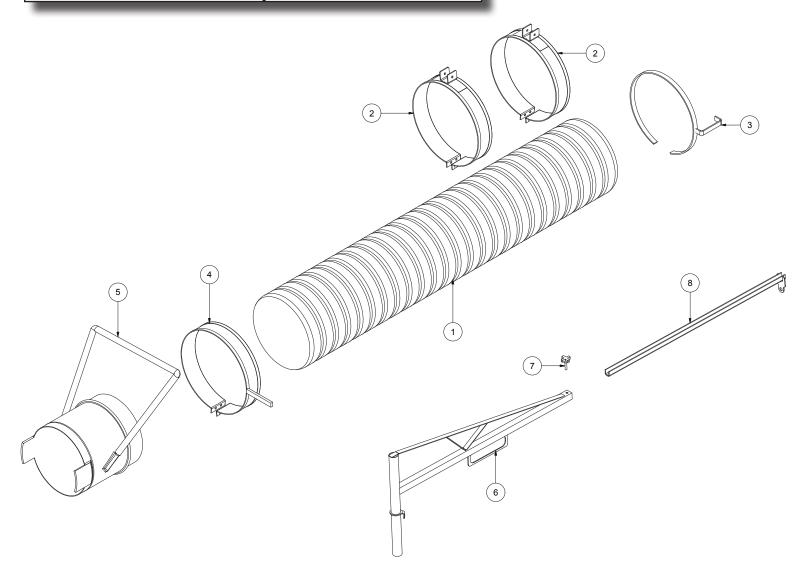
6-13 Rear Door Hardware



ITEM#	PART NO.	DESCRIPTION
1	7502.14A	Door Rod, LH
2	7502.14B	Door Rod, RH
3	7502.2	Rod Bracket
4	7502.3	Rod Bracket Back
5	1969.7X	Seal Pin
6	1969.39	Bushing
7	1969.4X	Seal Plate
8	1969.5	Handle Clip, welded on
9	1969.6X	Handle
10	7502.1	Keeper

ITEM#	PART NO.	DESCRIPTION
11	7502.99	Lock Down Bracket
12	SCL800.027B	Door, driver side
13	SCL800.027A	Door, pass. side
NS	SCL800.028	Hinge for Door

6-14 Intake Hose Group



ITEM#	PART NO.	DESCRIPTION
1	STD.1602.12	Intake hose, 12' diameter
2	LCT616.603U.12	Support Band
3	65.1607	Hose Clamp With Limit Switch
4	LCT616.612	Hose Clamp, Nozzle
5	65.1600.12	Intake Nozzle
6	80.1601	Hose Boom
7	80.1605	Lockdown Knob
8	80.1602	Boom Slide

SAFETY PRECAUTIONS

AWARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.





DO NOT RIDE, SIT OR STAND ON UNIT.

RIDING ON UNIT
COULD RESULT IN BODILY
HARM OR FATAL INJURY
USE EXTREME CAUTION WHEN
UNIT IS IN USE, OR IN MOTION.

If the decal above is missing or damaged call ODB immediately and we will send you a replacement free of charge. Never operate a unit with damaged or missing safety decals.

A DANGER

DO NOT RIDE, SIT OR STAND ON UNIT

▲ DANGER

DO NOT MODIFY THE UNIT FOR RIDERS IN ANY WAY. SERIOUS INJURY OR DEATH MAY OCCUR

ODB's leaf collectors are NEVER to be used to accommodate riders. If your unit has been modified to accommodate riders, remove these modifications immediately as this can result in serious injury or death.

A CAUTION

DO NOT ATTEMPT TO OPERATE OR REPAIR THE LEAF COLLECTOR WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL

IF YOU HAVE ANY QUESTIONS CONCERNING THE INSTALLATION OR OPERATION OF THIS UNIT, PLEASE CALL ODB FOR ASSISTANCE BEFORE ATTEMPTING TO REPAIR OR OPERATE THE UNIT.

IMPROPER USE OF ANY MACHINE CAN RESULT IN INJURY!

STUDY AND FOLLOW ALL SAFETY PRECAUTIONS BEFORE OPERATING OR REPAIRING UNIT

THIS MANUAL IS AN INTEGRAL PART OF THE LEAF COLLECTOR AND SHOULD BE KEPT WITH THE UNIT WHEN IT IS SOLD.